FLASHES AND PLUGS

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CIRCULATION

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Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY

November 27, 1954

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EFFECTIVE PERSONNEL MANAGEMENT

A Must for Every Successful Business

By G. E. KRIEGER *

THERE ARE two principal needs of management. The first is the tangible needs of the business or the needs of "know-how" or technical knowledge. The second is the intangible needs or the needs of "human relations", the knowledge of people and what makes them "tick."

The second need, the need of "human relations" is met in today's business world by good personnel management.

And what do we mean by personnel management. Personnel management is not merely the process of hiring people or conducting wage negotiations. It is the process of selecting, training, motivating, appraising, rewarding and inspiring people so that they will skillfully, accurately, intelligently and enthusiastically produce a product or service of good quality, at a price acceptable to the customer, under wages and working conditions satisfactory to the employe, and producing a reasonable profit to the owners of the business.

Through modern personnel management, this chain of events is brought about by relating together the aptitudes and capabilities of the man to the requirements of the job, the matching of men and machines, the coordination of the desires of the employes and the requirements of management. We must remember that personnel management is not only recognized as a requirement in a large firm which can justify the operation of a complete personnel department, but it must also exist in the small company through the common sense application of understanding of people by management, and by doing things with them in the management-employe team operation.

All of our operations involve people. Our problem is not quite like a manufacturing problem processing a raw product into finished goods. The people with whom we deal—employes (and this includes management), customers,

G. E. KRIEGER

owners and investors—are interested in obtaining and retaining a larger share of the world's goods — more wages for employes, better return on the investment for investors and owners, and a greater value of telephone service for customers. There cannot be a greater share for those who divide the telephone dollar pie unless one makes the pie bigger. In our business this can be done by improving the efficiency of operations such as reducing the unit cost of building plant in the first place and also by reducing the operating and maintenance unit costs of keeping the plant running and rendering service.

And how are we going to achieve this? It must be done by the efficient coordination of the management and production team. They must be motivated to produce with quality and efficiency. They must be trained so as to possess complete knowledge of the most efficient way to perform their job. They must know how to communicate with one another by effectively giving written and oral instructions. They must know how to participate in conferences.

Wages are not the only reward and incentive in which people are interested. The dignity of man must be recognized. Pay is important, but men and women want to work under conditions of contentment. They want to work with others whom they can respect and who respect them. They do not want to be told what to do. They want to do the production job *with* management!

We, too, must remember that employes of any business represent a very sizeable investment. For example, the training expense of a traffic employe is estimated to be at least $300. Payroll expense makes up 36 per cent of the total cash expenditure of our business, or $50 per station, per year. Present-day management can neither afford to hire people who lack the capacity to become competent employes, nor can it afford to overlook proper training to bring out the best that each one of

* Mr. Krieger, who is vice president of the West Coast Telephone Co. of Everett, Wash., presented this address at the Plant Conference of the recent convention of the United States Independent Telephone Association.

them can offer. No longer can we just hire people, but instead we must make every effort to select the most desirable people available. Then every effort should be made to aid them in proving their ability. It is equally as important to select and train adequate employes as it is to choose and arrange plant material and equipment. Really, the problems of personnel administration are on a par with those of financial administration or technical operation of the business.

Effective personnel management can be achieved by the operation of a personnel department, small or large, working in the eight general fields of personnel administration of:

(1) Labor relations.
(2) Wage administration.
(3) Labor supply.
(4) Labor economics and research.
(5) Safety and health.
(6) Employe welfare.
(7) Employe training and instruction.
(8) Employe communications.

And above all, in developing a complete understanding of *human relations* through the organization. Due to limitations of time, detailed explanation of the eight responsibilities of the personnel department are not possible here.

Ambition should be fostered and self-improvement encouraged by providing training and educational facilities for all levels of the employe and management team. Effective utilization of the manpower in our business is our major responsibility.

Good management-employe relations are brought about by the following:

(1) Leading instead of bossing.
(2) Teaching instead of telling.
(3) Frankness instead of continual suaveness and diplomacy.
(4) Listening instead of talking.
(5) Reasoning instead of arguing.
(6) Trusting instead of suspecting.
(7) "Joining with" instead of "doing for."

The growth problems of the industry since World War II termination have been and will continue to be serious. The constantly increasing American living standards include telephone service demands at levels where it never existed before. This includes demands for new service and for regrades of existing service.

Population increase, both actual and future revised, far exceeds the official forecasts. In addition, individual residential premises are replacing the multiple residential establishments of former years where married children lived with their parents. Customer toll usage has greatly increased. Toll service is no longer considered a luxury but an everyday necessity and convenience. This demand requires a substantial increase in toll facilities.

Business, in general, was so convinced that the postwar years would bring depression that it is hard to believe that the opposite actually occurred. For example, in our company since the end of World War II, we have had a three and one-half fold increase in plant investment, a two and one-half fold increase in stations, a five and one-half fold increase in payroll, a three and one-half fold increase in revenues, and almost a four-fold increase in expenses.

We also find ourselves caught to some degree in a facility shortage situation. This was caused to some extent by the generally-held opinion that the postwar era would be one of depression and, therefore, "Why expand." Shortages of critical materials and unavailability of capital have also curtailed facility expansion to provide normal plant margins.

We, therefore, find ourselves still faced with a large telephone service market, both present and future. People want satisfactory telephone service and are willing to pay adequate rates for it. To supply this market we must expand our facilities now and throughout the future.

Present telephone staffs are busy and any additional construction or operating activity must be largely carried on by additional people. Enough experienced telephone people to meet this demand are not available. We must hire the best available and train them. In addition, we must give our present people additional training and schooling in better and more efficient ways of carrying on their present jobs and the jobs which we want them to fill in the future.

Our personnel practices must also recognize these facts. Many Independent companies operated in areas where sudden and severe growth problems did not occur. With the postwar dispersal of industry away from concentrated industrial areas and with the movement of people to smaller localities away from the hustle and bustle of big-city living, many of them settled in smaller communities served by Independent companies.

These companies before the growth problem faced them, had relatively simple operations which required a minimum of supervisory personnel. Capable as these management people may have been, their companies' constantly increasing growth problems have seen them spread themselves supervisionwise to the point where operations were not getting adequate management and control.

Many of these management people also found themselves without the schooling or experience needed in the conduct of larger operations. It has been a case of too few trying to do too much with too little.

With the growth of many of these operations from a small to a big-time scale, the management problems have become severe. As companies grow there is a tendency of wage-rates to rise; of fringe benefits to increase; of construction and operating costs to soar. This situation must be met by newly-developed, more efficient, construction, management, control, operation and personnel methods.

Knowledge of methods must be obtained through education and training. We must go back to school again!

Through employe education and development we strive to achieve a balance between minimum first cost (capital investment) of our telephone plant and minimum continuing operating costs of that plant so that we may meet our three operating objectives:

(1) Good service at adequate rates.
(2) Satisfactory wages to employes.
(3) A reasonable return on investment.

Throughout employe education at all levels, it must be stressed that business *must make a profit in order to survive.* There has been a tendency to emphasize the technical side of operations and neglect the adequate consideration of methods of producing a satisfactory net profit.

Under employe education, there is also included those day-to-day procedures which we use to study and control construction and operating costs by the study and adoption of more efficient methods, labor-saving devices, better materials, etc. These include 20 on-the-job and off-the-job things which should be constantly followed in the business to develop employe knowledge and performance. These include bulletin and training procedure, intercompany exchanging of ideas, suggestion encouragement, trade publication reading, establishment of technical libraries on company premises, telephone convention support, welcoming information from manufacturers' representatives, professional society participation, apprentice program establishment, house organ publication, reporting on results and future plans to employes, encouraging civic activity participation, conducting economic education meetings, sending technicians to manufacturers' schools, encouraging employes' technical hobbies, establishing responsibility programs on costs and human relations,

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by FRANCIS X. WELCH WASHINGTON EDITOR

Allowance for so-called "attrition" an unusual feature of Mountain States T&T rate case in Arizona . . . Alberta Plan an alternative. Companies with low-interest REA loans can get along on lower rate of return, Louisiana commission chairman states.

THE Arizona Corporation Commission made an interesting ruling in the course of its decision, earlier this month, allowing a $2,587,206 gross revenue rate increase on intrastate business of the Mountain States Telephone & Telegraph Co. This increase amounts to about 65 per cent of the request which the company made last June when it sought a gross revenue increase of $4,002,802.

Incidentally, the Arizona commission reaffirmed its position in the ranks of so-called "fair value" states with respect to its rate base determination of the company's intrastate property at a figure of $50,995,608. Commissioner Parkman, who wrote the opinion, said that this splits the difference between original cost less depreciation and present replacement value. The company's estimate on replacement cost was in the order of 57 million dollars.

The somewhat unusual feature of the commission's ruling was made in the form of a separate allowance for so-called "attrition." This word, as currently used in utility rate cases, refers to the gradual wearing away of a utility's earning power during an inflationary period when there is inevitably a time lag between the period when a company's earnings are theoretically adequate and the period when the company can apply for and receive actual relief (by way of a rate increase) from the gradual deterioration of the net return during the intervening period. Under such circumstances, it often happens (as it happened in this case involving Mountain States Telephone & Telegraph Co.) that rates fixed at a previous time and designed to yield a reasonable amount of net return, actually failed to do so during subsequent months. The reason, of course, was the effect of increased cost of operations (wages, taxes, supplies, etc.).

All during the time this gradual erosion of earning power is taking place, the utility is faced with the necessity of taking three successive steps before it can get actual rate relief to put it back where it should have been in the first place, as far as reasonable return is concerned. These three steps which confront any utility company under such circumstances are:

(1) *Discovering the fact of loss.* The utility must first actually wait until it is hurt—that is, it must establish the existence of a loss, or a deficiency below the reasonable level of return, in order to be in a position to justify a rate increase as a matter of proof.

(2) *Proving the loss.* After carefully establishing the fact that there is a loss or deficiency of earnings, the utility must prepare a rate case, get its evidence together, train its witnesses, file its petition for a rate increase, and otherwise go through the formalities of starting the regulatory machinery moving in the direction of a rate increase.

(3) *The duration of the regulatory process.* The commission's staff must have an opportunity of looking over the proof. There must be hearings and argument after which the commission must consider the evidence and hand down its opinion. During all this time, the "attrition" has been grinding away, reducing the company's earning power below the level of the reasonable return more and more each month.

All of these three steps are time-consuming. But all of them must be taken. It may be possible for an alert utility management to anticipate the loss (by checking its cost and earning trends) in advance of its actual occurrence, thereby doubling up Step 1 and Step 2. This would tend to cut the delay to a minimum. Some regulatory commissions even frown on this practice. (A former Federal Power Commission chairman once delivered the gas and electric utilities quite a lecture about this.) They take the position that no rate case should even start until the loss of adequate earnings is an actual, provable fact—not a mere expectancy. They say, in other words, that the utility cannot holler until it is hurt. In any event, even though Steps 1 and 2 may be run together somewhat, all three steps must be taken before rate relief is allowed—no skipping any one of them. That is the law, everywhere.

The difficulty of all this, from the investor's point of view, is that the loss is absolute. It can never be recouped. The commission has no authority under the law to put into effect a rate increase which would operate retroactively. Past deficits are the investor's hard luck. That is also the law. Nothing can be done about it.

In all fairness, it should be stated that if the economic trend were in the other direction—whereby prices or operating expenses were dropping off and a rate *reduction* were indicated—this time lag would operate to the advantage of the investor. There might be a theoretical period, under such circumstances, during which the investor would enjoy an excess return, *above* the level of reasonableness, until the commission's regulatory machinery could get around to shaving off the peak with a rate reduction order. The law would be just the same. The investors could keep their extra earnings, because the commission cannot fix rates retroactively. Rates can only be fixed for the future.

But as a practical matter, the equities are all on the side of the telephone subscriber or utility consumer. The reason is that, over the past 75 years in this country, the trend of prices and operating expenses has generally been upward. There have been only a relatively few short downward trends, here

and there, such as happened during the depression of the thirties. Even in such a comparatively rare period, the investors' temporary "windfall" of excess of margin would have to be shared with Uncle Sam and the other tax collectors.

Since regulatory law is so definite on this point (mainly that past deficits cannot be capitalized or recouped, through subsequent rate collections), there is a moral obligation on the part of the commission to anticipate the lag factor in fixing rates for the future. In other words, while a commission admittedly can do nothing about a utility company's deficiency of earnings in the *past*, it can at least see to it that an adjustment is made in fixing rates for the *future*, an adjustment which will offset the attrition factor. But for how long in the future? And by what method? These are puzzling questions, indeed, for any regulatory commission.

The Alberta Plan

During the past couple of years, a Canadian regulatory commission made an interesting approach to this problem in what has since been written up as the "Alberta Plan." This plan was first explained by the Honorable G. M. Blackstock, QC, who was chairman of the Alberta Board of Public Utility Commissioners. It was during his term as chairman that the Alberta Plan was developed. It was used in a couple of rate cases before the Alberta board. Chairman Blackstock explained how this plan works in an article published in *Public Utilities Fortnightly*, issue of Feb. 18, 1954.

In a word, the Alberta Plan treats attrition losses due to procedural delays (Chairman Blackstock used the term "transitional loss") just like any other operating expenditure made by a utility for the benefit of the ratepayers. This is based on a theory that if a ratepayer wants a delay (for regulatory procedure) on a rate increase which is subsequently found to be justified, he ought to pay for it. And so the amount of the loss due to such delay was held to be subject to amortization out of rates. It could also be treated as an additional capital investment and added to the rate base.

The Alberta Plan approach was rather original and it created a good deal of discussion among the American regulatory commissioners. A symposium of their views, mostly critical of the Alberta Plan, appeared in the article in *Public Utilities Fortnightly*, issue of June 20, 1954. The American commissioners objected chiefly to the retroactive character of the Alberta Plan adjustment, as of the time the rate increase order is actually handed down. Some of the commissioners thought it smacked too much of a device for recognizing or recouping past deficits in earnings. That would make it beyond the authority of the American state commissions, under the terms of prevailing statutes.

The Arizona Commission Approach

The Arizona plan is confined to future rates. The commission conceded that it could do nothing about the past losses, due to attrition, of the Mountain States Telephone & Telegraph Co., but it could do something about preventing rates fixed for the future from failing to produce the estimated fair rate of return.

The commission thought that the adjustment should be projected for about two years in the future. The theory is that, after that time, the inflationary factor might change or, in any event, the company would then have another opportunity to bring its case back to the commission for further rate relief. The actual mechanics of the Arizona commission's plan were worked out by its staff engineer.

He used a formula, based on differential calculus, for projecting a monthly average of attrition to a midpoint of a test period. In order to arrive at this average, the commencement of the test period was pushed back somewhat, to a time when the attrition loss first began to show up. Based on a test period of 30 months, the commission engineer came up with a monthly attrition loss rate expressed in terms of a percentage of the rate base. This allowance for a period of two years in the future, was then translated in terms of dollars. It was found to amount to $366,498, which the commission designated as "slippage."

At this point the Arizona commission was confronted with the problem of how to apply the adjustment. In a previous rate case, the commission had allowed, as fair and reasonable, a return of 6¼ per cent. But over the test period the return had actually dropped as low as 4.65 per cent because of attrition losses. That meant that if the commission was going to fix rates that would continue to yield an actual 6¼ per cent return over the two-year future period, an independent adjustment for attrition would have to be made.

It could be done in three ways: (1) apply the "slippage" percentage to the original cost rate base; (2) add it to the percentage rate of return; and (3) make a separate dollar allowance independent of actual rate increase authorized, on the theoretical basis of 6¼ per cent return for the future.

The commission adopted the third alternative. Here is a little more detail on how the Arizona formula operates in the following passage from Commissioner Parkman's opinion:

"Rates are made for at least a reasonable period in the future. The amount by which the company's earnings in 1953 and thus far in 1954 fall

(Please turn to page 36)

Attention All Independent Companies
USITA Committee Needs Help

In 1947 the Dial Interexchange Committee of the United States Independent Telephone Association, after extensive studies and a series of conferences with Bell System representatives, issued a report containing an Illustrative Control Office Agreement and a schedule of payments intended to be used as a guide under certain conditions when one Independent telephone company converted its small exchange to dial operation and called upon another company to handle its information, intercepting, and similar auxiliary traffic work. That schedule also included "guide" payments to apply for use in carrying this auxiliary traffic over the control office company's toll lines.

This guide contract has proven to be very useful. Because it does contain suggested levels of payments developed in 1947, however, it is desirable to review its applicability under today's conditions.

To assist the USITA Dial Interexchange Committee in its reviews, secretaries of state telephone associations are being called upon to cooperate by securing from Independent companies in their respective areas the facts pertinent to their present control office agreements. The USITA committee requests that each company having a control office agreement immediately notify the secretary of its state association of that fact in order that he might request the specific information required.

The committee is desirous of having all such information reach it by or before Dec. 31.

THE PLANT MAN'S Notebook

by Ray Blain, Technical Editor

WE RECEIVED a letter, recently from Mr. L. K. Powley, plant superintendent of the Elyria (O.) Telephone Co., in which he relates a sad experience of his with pipe pushing as follows:

"In a recent 3-inch pipe pushing project carried out under what appeared to be ideal conditions, the alignment was thrown 18 inches out of center by a small piece of sandstone. Also, while drilling under a railroad in Ohio, a construction foreman found that a small flint stone had proved sufficient to throw the drill upwards. The uphappy result was a well-pierced railroad cable representing $2,000 damage.

"Prior to pushing pipe, I think, anyone would be well advised to investigate his soil conditions. The trenching at either side of the section through which the pipe is to be pushed should provide a good indication of the presence of rocks and stones. As a further precaution, inspection holes along the route would enable the progress and alignment of the pipe or drill to be checked.

"In the case of a small company without proper equipment for this type of work, I would recommend utilization of the services of a reliable and experienced contractor with a good insurance coverage."

Excellent advice, Mr. Powley, and it seems that we have been extremely lucky down through the years as we have never had a serious pipe pushing accident.

• • •

We had an opportunity to examine one of the first all aluminum and glass outdoor type telephone booth at the airport in El Paso, Tex., recently.

We are advised that the standard panels used in this type of booth are interchangeable. In some locations, waist-high enameled panels may be preferred; in others, all glass panels might prove desirable. Color of the panels can be red, blue or green. The booth we examined was all glass, held in place by the aluminum frame.

These booths, it is claimed, are extremely durable and easy to assemble. The 120 parts and sub-assemblies, with 178 nuts, bolts and washers require less than three hours to put together, we are informed.

• • •

When travelling via aircraft, it is surprising to note how many passengers will make toll calls from intermediate stops. These stops are usually of 20 minutes or less and that most of these calls are completed with such dispatch is certainly a compliment to the efficient service provided by the telephone companies.

There is surely a need, however, for commercial toll service from airplanes in flight. This service has proven its worth on passenger trains and undoubtedly will prove even more desirable from planes in flight in the not too distant future.

• • •

Someone has said there are better ways of getting up in the world than by hitting the ceiling.

• • •

The third annual Wire & Cable Symposium, sponsored by the United States Signal Corps Engineering Laboratories, will be held at the Berkeley Carteret Hotel, Asbury Park, N. J., on Dec. 7, 8 and 9, 1954.

These symposiums are well attended and appear to fill a long-neglected need in the communications industry.

• • •

We have received several reports recently telling us that movie theatres are using a recorded announcement to answer their telephones. These announcements name the film, its stars and the time it is being shown. The machine then advises the caller to dial another number if additional information is required and signs off with a polite thank you.

This appears to be a very good idea and there should be many similar locations in which a recorded announcement could be used to advantage in supplying general information and in saving the time of an attendant.

This country, to date, has been most backward in the use of recorded announcements as compared to several countries in Europe. Some countries have the story of the day, recipe of the day, sport news, etc.

• • •

Construction men now generally agree that the front-mounted pole derrick on a line construction truck is more efficient than the rear-mounted type. This front mount also contributes to safety as the operator has a full view of the work at all times. Some of the latest construction trucks are designed so that the pole derrick may be mounted either on the front or the rear, whichever is best suited to a particular job.

• • •

The Northern Ohio Telephone Co. experienced a freak accident the other day in their Delaware, O., exchange. During a wind storm, a tree blew down and struck a "No Parking" sign and drove its steel post through a 200-pair underground cable.

• • •

We enjoyed a visit in Washington, D. C., recently with Harry Billica, a long-time friend of ours.

Harry is retired from the Copperweld Steel Co. and is presently a consultant for the Preformed Line Products Co. In this connection, it appears evident that the preformed metal line guards produced by this company may prove particularly useful for attaching self-supporting plastic-covered cable at poles.

• • •

The following has been suggested as a vacation safety slogan: "Watch out for school children — especially if they're driving cars."

It is a definite obligation of the telephone company to educate the PBX customer management, extension user and attendant to become telephone-wise in order that they can and do receive the most out of the equipment they are paying for.

Choosing and Training

The PBX Service Adviser

By G. R. BRACKETT

JUST how important should a telephone company consider the private branch exchange? That is a good question, so let us take it apart and examine it.

Roughly, 60 per cent of all calls, local and toll, either originate or terminate at these private switchboards. The toll revenue from these same customers amounts to about 33-1/3 per cent of the total toll revenue. In other words, 60 per cent of the total exchange traffic and one-third of all toll revenues comes from this small percentage of subscribers. That alone makes the PBX customer a pretty important individual. But let's go farther.

In some cities there are PBX systems as large and complicated as a good sized central office which have the same problems and the same needs for close supervision, if the private telephone system is to give well-rounded service.

This all adds up to one thing—the service job done in any automatic, manual or toll central office is governed somewhat by the service job done by the PBX customer.

Just why should the telephone company provide assistance to the PBX customer? There are many reasons for doing so. In the first place, a telephone company is primarily a service organization. Service is what it has to sell; in fact, service is just about all it has to sell and the character of the commodity the telephone company sells its customers has a direct influence upon public opinions and sometimes influences the attitude of the telephone user when the matter of a franchise or an increase in rates comes up.

The correct operation of a PBX system affects the general character of all central office telephone services. Placing outgoing calls promptly and properly and disposing of incoming calls smoothly and quickly achieves a saving of time and effort of PBX attendants and central office operators; more productive use of PBX and central office equipment; a reduction of customer complaints; better satisfied telephone users; better public relations and increased revenue for the telephone company and a savings for the PBX customer.

Dial service is being extended rapidly in handling local and long distance calls. As a result, telephone users encounter central office operators less and less frequently and deal proportionately more often with PBX attendants. Consequently, the telephone company's responsibility in training attendants and developing their service attitudes is constantly becoming of greater importance than ever, if they are to continue to merit and hold subscriber approbation and esteem.

The telephone company cannot escape its civic duty. The responsibility of good telephone service rests with the telephone company whether the service originates in a central office or at a PBX. The company is obligated to see to it that PBX attendants have full knowledge of the correct operating of their switchboard equipment and are familiar with the overtones that spell the difference between good service and mediocre service.

It is a definite obligation of the telephone company to educate the PBX customer management, extension user and attendant to become telephone-wise in order that they can and do receive the most out of the equipment they are paying for.

The accomplishment of these obligations depends almost entirely upon the telephone company's sincere desire to assist their customer.

If the private switchboard supervision means that much to the telephone company and to the PBX customer, then the person who is to work toward achieving these goals should be selected with the greatest of care and she should have certain requisites, if she is to succeed in her work.

Her job will call for self-reliance, resourcefulness and tact. Her deportment must be dignified and impeccable, her personality stable, if she is to escape the pitfalls of popularity and public esteem. A pleasing personality

and cheerful disposition will go far in carrying her through days when everything seems to go wrong. One of her most important essentials should be the ability to meet people, singly and in groups. It goes without saying that she should have a good command of the English language, be intelligent and imbued with a desire for learning. She must be mentally fit and in good health, if she is to be able to withstand the rigors of her job. She should dress in a mature and business-like fashion and carry herself with poise.

Of course, there are other things than these characteristics that should enter into the choosing of this supervisor of the PBX customer. She should have a thorough understanding of the operation of all types of PBX switchboard equipment. She should be familiar with toll, manual and automatic operating practices. She will be consulted on the location of PBX boards, the type of headset the attendant should use, the trunk and extension arrangement best suited to a particular PBX and force requirements and, therefore, she should have some knowledge of these subjects.

Service reviews and peg counts are necessary for administration purposes and the control of traffic. They are tools of immense value, but they need adept handling and only one who is completely familiar with their many angles will profit from their usage.

There are many other features about the telephone business which this PBX service supervisor should know. Perhaps she doesn't need a complete technical knowledge of all angles but she should, at least, be in a position so she will not be embarrassed by lack of know-how when a customer questions some recommended practice.

She should have a passing knowledge of DSA, Information and other operating room auxiliary services. She will be asked about the Repair Service, work of the Service Representative, billing procedures and Plant Department activities. Even a basic understanding of automatic equipment and operation will be of value to her.

When the person has been selected to fill this exacting role, our first responsibility should be to thoroughly inoculate her with the importance of the job for which she has been chosen. It should be someone of rather high supervisory level who will tell her why she was selected for the job and the importance of the work ahead. He should give her a resumé of responsibilities as a supervisor and counselor to PBX customers; and explain that it will be up to her to develop and maintain good PBX service and that in order to do so, she will have to develop and maintain a sound service perspective on the part of the attendants, extension users and customer management under her supervision. He will dwell shortly upon the necessity for seeing that efficient use is made of the equipment at the PBX and how she should be capable of recognizing the need for change in type, amount or outlay of customer equipment requirements. She should know that it will be a part of her job to develop opportunities for placement and be in position to provide trained attendants when needed.

The Bloomington district R. B. Still Pioneer Club of the Illinois Telephone Co. held a picnic at the above lodge at Lake Bloomington on a recent evening. Pioneer members and their families, totalling 70, enjoyed the outing. Pioneer Vice President Wanieta Gosnell, of Bloomington Traffic, planned the affair and was assisted by J. B. Cherry, Dorothy Sears, Geraldine McKeon, Ruby Green, Jesse Yarger, Fern Van Horn. After-dinner entertainment was arranged by Ruby Green and Edna Goodwin and other members of the committee, including Rosie Baldini, Corky Thompson, Terry Saunders and Bill Fisher.

She should know that at all times it will be necessary for her to coordinate her activities with those of other departments and other sections of the traffic department. She should be told that she will be expected to report such matters that come to her attention which affect company relations with customers and to interpret company policies and practices when opportunity is presented.

The PBX service supervisor should understand the dangers of carrying gossip from one PBX to another; also the caution that is necessary in her contacts between customer management and PBX attendant, if the supervisor is to avoid having the attendant feel she is discussing her work in a critical way with the attendant's "boss."

She should be told to tactfully avoid involving herself, or the telephone company, in matters which are definitely of neither's concern.

After she has accepted the new responsibilities as outlined she should learn of her new title—PBX Service Adviser. She should then be given a description of the training program ahead and informed why it is necessary that she should receive such an over-all schooling.

No time limit should be specified for covering each section of training. The student Service Adviser's adaptability to the new work, her quickness to absorb the instructions and her interest in the Service Adviser's job should determine, to a large measure, the speed with which the student graduates as a capable Service Adviser.

Instructions should be conducted in an informal manner and conform to the principals of learning and teaching, recognizing that the prime factors of good presentation are naturalness and sincerity of purpose. There are four fundamental steps in good instruction:

First, prepare the student. Put her at ease. Then find out what she already knows and stimulate her interest in the new job and tell her of the purpose of the job.

Second, the job must be presented; tell, show, illustrate it step by step. The student should be taught no more than she can master at any one time. Key points should be stressed. The instructor should be clear, thorough and patient.

Third, the student's performance should be tried out. A test should be made by having her perform. The student should explain key points as she tells and demonstrates what has been taught her. The instructions should be continued until the instructor knows the student knows.

Fourth, the follow up. Check frequently. Questions should be encouraged. Errors should be corrected. When it is necessary reteach. Put the student "on her own." Let her know where she can go for help.

Only one phase of instruction should be taken up at a time. Each section should be thoroughly learned before passing on to the next.

The initial training of a Service Adviser should be conducted, if possible, in a city where PBX activities are developed on a centralized basis, where there is PBX schoolroom training

equipment. Where such a plan is not practical, the training should be conducted by an experienced Service Adviser on the customer's premises. In this case, extreme caution must be maintained so that the attendants will not get the idea they are being used to train a Service Adviser who will soon be supervising them.

These instructions are designed to provide the Service Adviser with sufficient information so that she may actively participate in PBX service improvement work at the earliest possible time.

Knowledge of the following auxiliary services need not be a "must" in the training of the student Service Adviser. However such knowledge will help her a great deal in future contacts with her PBX people. She is constantly questioned on all phases pertaining to telephone operations — by management, by extension user and by the attendant. Of course, she can't have, and isn't expected to have, the answers to all questions. But she should be able to give an intelligent answer to the common everyday query that is related to the ordinary happenings in the business of transmitting speech by wire.

Training Prior to PBX Instruction

Review toll operating practices if student's experience has not been recent. Explain arrangements for handling toll calls in the particular territory in which the Service Adviser will operate—station-to-station, person-to-person and collect calls. She should know how traffic is handled to community automatic offices and to the mobile unit. Relate how delayed calls are processed — disposition of tickets, procedures, etc. Explain ticket work, recording details. Describe legend on the progress of a call and timing methods. Let the student record some calls at switchboard. Illustrate the method of establishing connections to direct circuit points and to built-up destinations. Explain through and inward boards and key pulsing. Discuss ticketing and timing and how charges are handled for hotels. Let student Service Adviser listen in with operators who handle various types of calls.

Review local manual operating practices, if student will supervise PBX's in manual offices in her area. Explain answering jacks and lamp cap markings. Describe subscriber's multiple arrangement, party line markings, underlined groups, signal plugs and the classes of service provided.

Demonstrate operation in completing various connections such as, answering jack to multiple; multiple to multiple; answering jack to outgoing trunk multiple that leads to the B board, Information, toll board and other auxiliary services. Demonstrate how operator rings on a straight line; on a party line; on a rural line.

Explain method of handling supervisory signals, permanent signals, emergency calls, rural calls, toll switching connections.

Allow student to listen in briefly with operators who handle various types of calls.

Review Information practices. Explain upkeep of Information records, length of search time per call (average 50 seconds) and other features pertinent to Information service, such as saving in operating time and circuit holding time when the calling party furnishes the out-of-town number.

Discuss DSA operating practices. Show and explain multiple books and codes used for changes, removes, temporary disconnects, etc. Give a brief explanation of how calls for vacant, changed and disconnected numbers are automatically shunted to the DSA board. Have student listen in with DSA operator for a short while. (In a manual exchange this would be the Intercepting position.)

Review other auxiliary services such as mobile unit, TWX switchboard, ticket filing, rate and route desk, etc.

Visit Repair Service with student and explain customer's card with information of equipment in use, party line service, date installed, subscribers' complaints, etc. Explain how tester can determine kind of trouble and where it can be found; that tester is familiar with most telephone faults and can help the repairman when he runs into difficulty. Let student listen in briefly to Repair Service operating.

Visit the Service Representative with student and explain how many customers are cared for by each service representative. Show card record of class of service, equipment and auxiliary services. The student should know that by becoming familiar with her particular subscriber, the Service Representative learns of their idiosyncrasies and the customer, dealing with her alone, feel they are getting the help of someone who knows their problems and can help them when occasion demands. Let student listen in briefly to learn of types of calls received by Service Representative and how she handles them to the complete satisfaction of the customer.

Visit the Accounting Department to learn of local and toll billing methods. The Service Adviser will receive a lot of questions and the whyfores of billing. If there is no accounting, a visit to the business office will accomplish the same purpose.

A tour of the plant maintenance and installation departments will acquaint student with the methods used in handling complaint items and installations of PBX equipment. There she will meet the plant people who will work closely with the Service Adviser.

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Photos taken at the recent Michigan association convention. LEFT PHOTO: MR. and MRS. L. W. REYNOLDS of Ontonagon, owners of the oldest independent telephone company in Michigan, register at the desk at which MRS. KATHERINE FOX (left) and MAXINE N. LOVELL are attendants. RIGHT PHOTO: RAY FOULKROD (left) chief engineer of the Michigan Bell Telephone Co., discusses new equipment with MR. and MRS. JOHN W. COLLVER, owners of the Climax Telephone Co.

From every city and town where Strowger Automatic is used comes the same convincing story: time proves that nothing can equal it for dependability! Here's one of our hundreds of satisfied customers—High Point, North Carolina.

"Half a Lifetime—and ALL'S WELL"

STROWGER AUTOMATIC

"Half a lifetime—and" *of course,* "all's well!" That was just what the North State Telephone Company *expected* back in 1919 when they cut High Point, North Carolina, over to Strowger Automatic. For even then, Strowger Automatic was a byword for dependability.

High Point, and hundreds of successful exchanges like it, are your guarantee that Strowger Automatic is your safest investment.

When you take a close look at Strowger Automatic equipment, you can *see* one of the reasons why it's so dependable. It's built solid! But there are other reasons you *can't* see, like quality materials and craftsmanship in manufacturing. And the biggest reason is experience—Automatic's more than 60 years of research, development, engineering, and manufacturing of successful exchange equipment. Only automatic can offer the assurance of such a record. That's why the biggest and most successful companies buy Strowger Automatic.

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Visit the Sales Engineering Department if any for a know-how of sales engineering. There the student will learn how closely she should work with the sales engineers, if they are to accomplish their common goal—better service to the customer. Too, she will meet the sales engineers with whom she will work.

There will be times when a little knowledge of automatic equipment and operation will go far toward better service for the customer. A visit to the supervisor and assignment clerks will give the student an opportunity to learn the reason for slow dial tone, roll offs, etc. She will also learn why line finder and connector balance is so important to the efficient operation of the entire automatic PBX system, and other features pertaining to automatic PBX operation.

Initial Training—PBX Schoolroom

Introduce operating booklets on cord PBX switchboards and explain contents. Give student Service Adviser a thorough training on manual cord board operation, covering all classes of connections. The instruction should be the same as that given a student attendant. The Service Adviser should be capable of operating every type of PBX board, if she is to instruct wisely and be able to recognize operating difficulties inherent in certain PBX systems.

After student Service Adviser is familiar with all phases of cord board operation she should be prepared for teaching the student PBX attendant.

Explain and discuss instructor's guide for training PBX attendants after which allow student to observe experienced instructor as she teaches student attendant cord board operation. Then have student Service Adviser practice training, experienced instructor acting as trainee.

When it is felt student is capable, have her train attendant on cord board operation. This initial training should be done under the close supervision of an experienced instructor. Follow up the training of this first student, visiting her at her own switchboard. Give reason why it is so important for a quick follow-up after initial training, if new attendant is to develop properly. Describe subsequent training of PBX attendant, explain that schooling will be continuous, so long as attendant is engaged in PBX operating.

Visit non-multiple cord boards to observe how an experienced Service Adviser analyses attendant's work and suggests corrective action. Discuss these visits upon return to the office. Review service faults found, corrective action taken and results obtained.

Thoroughly discuss various items of service failures. Why do they exist? What can be done to correct them? Review initial training of attendant and basic fundamentals of PBX operating.

Explain how analysis of attendant's work is made by personal observation; with listening set. Tell of service improvement procedures and what service items need attention; what is the basic cause for service failures; what corrective action is needed and what follow-up supervision will be necessary to insure that remedial suggestions are being followed.

Describe in detail the types, layouts and capacities of all types of PBX systems—non-multiple, multiple, both automatic and manual. Describe through and non-through supervision and how each type contains features desired by customers.

In company with an experienced Service Adviser have student visit all types of non-multiple and multiple switchboards, both manual and automatic. Have student analyze work of attendants to determine cause of service failures; to suggest remedial action and to observe service improvement work.

At the end of each day the visits should be reviewed and experiences discussed. When the instructor feels that student Service Adviser is capable of starting out on her own, she should be allowed to do so for a few visits. When she returns to the office, discuss her visits with her and analyze her work and suggest corrections if necessary.

After the student is quite familiar with training and supervising on cord switchboards, she should then be prepared for teaching cordless switchboard operation. A similar training formula as that used for the cord board instructions will suffice. After student Service Adviser has trained on cordless board operation, she should visit switchboards of this type and discuss service improvement plans for each board visited.

Usually there is no schoolroom training equipment for all types of automatic PBX switchboards. However, there are manuals of operation put out by the manufacturers and these should be thoroughly reviewed with the student Service Adviser. After the review a visit can be made to a customer's premises where the particular type of automatic switchboard is in operation. An on-the-job study of equipment functions and switchboard operating features can then be made by the student. It will be well to consider at this point that at a later date the student may be supervising these same switchboards. It might have a disturbing affect upon the attendant, if she realized she was helping to train a student who would soon be supervising her operating.

At this point, also, it might be well to explain the purpose of service reviews and tell why a service survey is never taken without the sanction of both the PBX attendant and customer management, that before such a study is taken there will be need for assurance that the information contained in the study will be used properly, for training purposes only. Discuss the frequency of reviews, the length and number of observations and the grading system that is to be followed.

However, the student Service Adviser should not be trained on service surveys at this time. It is, at best, a difficult undertaking and a very important one and should be covered slowly and meticulously. After the student has become thoroughly familiar with her visiting and training duties, she can then be taught the technique of instructional observing.

As a last bit of information, the student should be told of the supplies that may be available for PBX use, such as: Transparent windows and name strips for designation strips; black signal plugs for vacant jacks and vari-colored one for use at hotels to designate guest out, not to be disturbed and other reasons for special handling of calls; plastic sleeves and tiger clips to be used by the attendant to mark special handling of a connection; dialing tools and dialing pencils; trouble sleeves to mark faulty cord pairs; pamphlets and literature covering PBX activities; frequently called number booklets, etc.

The related work of other departments should be explained to the student. She should know clerical routines and be able to keep records and write up reports.

The Service Adviser should know what to do in case of service criticism and be able to make a report and know where complaints should be sent.

She should know about the placement of attendants and its importance to the over-all service picture. The student should know how to estimate the qualities of an applicant for the position of PBX attendant and why certain firms require certain qualifications in their choice of employee.

Finally, she should be told that all services are given at no cost to the customer, in order to fulfill the telephone company's obligation to see that its subscribers get the most out of the equipment they are paying for.

REA APPROVES $1,932,000 FOR LOANS IN SIX STATES

Nine REA loans to improve and extend telephone service in six states were made from Oct. 24 to Nov. 13. The loans, amounting to $1,932,000, were as follows:

On Oct. 28 the Delcambre (La.) Telephone Co. was allocated a loan of $136,000, to improve and extend rural telephone service in Iberia and Vermilion parishes. The REA loan will enable the company to convert the present common battery system, serving 290 subscribers, to automatic operation, and add facilities to serve 233 additional rural families now without telephones.

About 16 miles of the existing line will be rebuilt and 20 miles of new line added. A new automatic central office building will be constructed at Delcambre. The completed system will consist of 40 miles of line. Lane J. LeBlanc is president and manager of the Delcambre company.

* * *

Lehigh (Iowa) Valley Cooperative Telephone Association, on Nov. 1 was allocated $192,000 to finance the improvement and extension of rural telephone service in Webster county. The cooperative is now providing magneto service to 356 subscribers over 69 miles of line. With the REA loan, the borrower plans to convert the system to automatic operation, rebuild 62 miles of the existing line and add 34 miles of new line. A new automatic central office building will be constructed at Lehigh.

These changes will make it possible for the Lehigh cooperative to furnish new and improved service to more than 500 subscribers in its service area. Subscribers of the Lehigh system will be able to make toll-free calls to the town of Dayton. The completed system will consist of 98 miles of line. G. E. Thomas is president of the Lehigh cooperative.

* * *

Avoyelles Telephone Co., Cottonport, La., on Nov. 1 was allocated $200,000, third loan to this borrower. The operating territory of the Avoyelles company lies in two distinct sections—the larger or Cottonport section containing seven automatic exchange areas, and the smaller Mangham area containing only one exchange.

The Nov. 1 loan funds will be used in the Cottonport section to finance the construction of 39 miles of line and other facilities to bring service to 195 subscribers not included in prior loans; also the funds will provide for service without toll charge among the seven exchange areas in the Cottonport section.

The three REA loans, totaling $954,000, will enable the borrower to bring new and improved service to 2,746 subscribers in Avoyelles, Franklin, Richland and St. Landry parishes.

The completed system will consist of 354 miles of line and eight exchange areas. Since the first loan was approved, the Mangham and the Bordelonville exchanges have been cut over and about 650 subscribers are now receiving automatic service in those communities. William Yarno is president and manager of the Avoyelles Telephone Co.

* * *

Nash Telephone Co., Damariscotta, Maine, also on Nov. 1 received approval of a loan of $587,000 to improve and extend rural telephone service in Lincoln county. The Nash company now provides magneto and automatic service to 1,604 subscribers over 230 miles of line. The loan funds will permit the borrower to furnish improved service to the existing subscribers, and initial service to 182 rural families. The greater part of the existing line will be retained in the new system. Eleven miles of new line will be added.

Automatic central offices will be located at: Damariscotta, Sheepscot, South Bristol, New Harbor and Bremen. Present plans call for toll-free service among all the exchange areas. The completed system, consisting of 234 miles of line, will serve a total of 1,786 subscribers. George W. Hutchison is president of the Nash company.

* * *

Mid-State Telephone Co., San Antonio, Tex., received a Nov. 1 allocation of $194,000 to finance the improvement and extension of rural telephone service in Llano, Milam and Williamson counties.

The Mid-State company now owns and operates an automatic exchange serving 51 subscribers at Buchanan Dam, Tex. The borrower will use its own funds to acquire the Buckholts and Hutton exchanges of the Mid-Texas Telephone Co. at San Antonio, Tex. These exchanges now furnish magneto service to 260 subscribers.

The company plans to use the REA loan to convert these two exchanges to automatic operation. The present automatic facilities at Buchanan Dam will remain in place for use in the new system. About 100 miles of new line and other facilities will be added to serve 307 subscribers who are without telephones in the service area. The Mid-State operating territory lies in three noncontiguous areas each containing one automatic central office.

The completed system will consist of 123 miles of line serving 618 subscribers. W. S. Bain is president and manager of the Mid-State company.

* * *

On Nov. 5, Plain Dealing (La.) Telephone Co., Inc., was allocated $290,000 to finance the improvement and extension of rural telephone service in Bossier parish.

These loan funds will make it possible for the company to convert the existing system, serving 330 subscribers, to automatic operation, and provide facilities to serve 264 subscribers in the service area now without telephones. About 157 miles of new line will be added and 68 miles of the existing line rebuilt.

The completed system will consist of 225 miles of line and a new central office building. George L. Lee is president and manager of the Plain Dealing company.

* * *

Woodlawn (Ill.) Telephone Co. on Nov. 8 was allocated $167,000, third loan to this borrower. The company plans to use these loan funds to rehabilitate and expand telephone service in the Waltonville section of its service area. About 140 subscribers are now receiving magneto service from 27 miles of line in that section.

A new automatic central office building will be constructed at Waltonville, about 100 miles of new line added and 24 miles of line rebuilt. These improvements will enable the borrower to offer modern service to the existing subscribers and to 232 rural families in the vicinity now without telephones.

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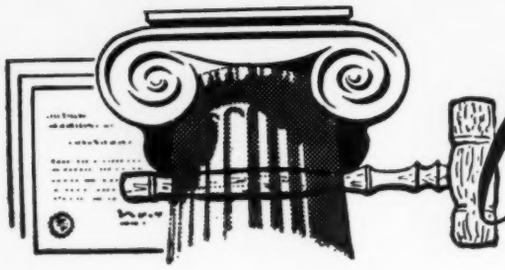


Courts and Commissions

Expansion of North Dakota Company Given Approval

Approving applications by the West River Mutual Aid Telephone Corp., New Salem, for expansion and improvement of its existing system, the North Dakota Public Service Commission on Nov. 12 authorized the company to:

Make a long term loan in the amount of $373,800 from the REA to finance acquisition of new properties and rehabilitation of facilities in the automatic exchanges at Beulah and Stanton.

Establish a new schedule of rates and charges.

Construct and operate a telephone system in portions of Oliver and Mercer counties, and to purchase existing telephone properties now owned by the Aplin Telephone Co., and the Lakeside Telephone Co., both of Beulah.

West River now furnishes service for 446 subscribers in its Beulah and Stanton exchanges. After a five-year development period, the concern estimates it will serve 704 subscribers in these exchanges as well as an estimated 260 new rural subscribers.

V V

Southern Bell Petitions For Tennessee Rate Raise

A $9,800,000 annual increase in its Tennessee intrastate rates was asked by Southern Bell Telephone & Telegraph Co. in a petition filed on Nov. 10 with the Tennessee Railroad and Public Utilities Commission (TELEPHONY, Sept. 4, p. 32).

In a letter to the commission accompanying the proposed rate schedules, Sam H. Youngblood, company general manager, described the utility's financial situation as "acute."

"Although Tennessee is our largest state from the standpoint of telephone development," he said, "the company's rate of return of 3.3 per cent in Tennessee is lower than in any other state in which we operate."

The petition said the proposed increases would yield "no more than a fair and reasonable return" of 6.75 per cent on present value of the company's properties. It was explained that the proposed rates were based on operating results for the 12 months ended last June 30.

Southern Bell has been endeavoring to get a Tennessee rate increase since Aug. 15, 1952, when the commission was petitioned for rates sufficient to produce an additional $5,034,361 annually. In February, 1953, this petition was amended to ask for rates to produce a 7-million-dollar annual increase.

The commission rejected that request July 14, 1953, with the assertion that existing rates, by the company's own admission, were providing a return of 4.96 per cent. The commission considered this return sufficient and was upheld last Mar. 5 by Davidson County Chancellor William J. Wade, who ruled:

"There is no warrant for a rate increase in Tennessee at the present time, even if we allow in full the company's claims for telephone plant under construction, materials and supplies, cost requirements and service pension accruals."

Although company officials had at first indicated they would appeal to the state supreme court, they subsequently announced they would present a new plea to the commission.

Southern Bell was granted three prior rate increases in Tennessee since the end of World War II. A 1946 petition was carried to court resulting in an increase Sept. 1, 1948, of $4,057,000 annually. The company got a $4,557,400 increase May 24, 1950, and an extra $3,750,000 a year, including 10-cent paystation calls, in February, 1952.

V V

Rochester Company Authorized To Sell $7,500,000 in Bonds

Rochester (N. Y.) Telephone Corp. was authorized on Nov. 16 to issue and sell privately 7.5 million dollars in 3¼ per cent bonds for a refinancing, modernization and expansion program (TELEPHONY, Nov. 13, p. 38).

Most of the improvements to plant and property already have been made. They will be refinanced through the bond issue.

The New York Public Service Commission approved the company's request for permission to sell the 35-year first-mortgage bonds to 15 institutional investors.

V V

Nebraska Company to Reorganize Under Commission Direction

The Glenwood Telephone Co. is attempting a reorganization, at the direction of the Nebraska Railway Commission.

Organized in 1911 as a non-profit corporation, the company serves 1,500 customers at Blue Hill, Rosemont, Cowles, Roseland, Holstein and Bladen. Originally shares of stock were issued at a par value of $25 to telephone customers. Through the years the record of shareholders has become vague and in actual practice the company operates as six separate exchanges instead of one unit.

In order to reorganize, the board must have the votes of 60 per cent of the shareholders in person or by proxy. However, only 40 per cent of these can be located thus far.

The company is attempting to trace another 20 per cent in order to effect a reorganization which may result in its operating as one unit with central management or the organization of separate units for various exchanges. In any event the commission has asked that regular reports then be made to it as prescribed by its rules.

V V

Woman Sues Iowa Company For Alleged Damage to Ear

A Lamont, Iowa, woman who claims an ear was injured by loud noises in a telephone receiver is suing for $10,000 damages.

This was disclosed on Nov. 12 when the Grand River Mutual Telephone Corp., Princeton, Mo., defendant, asked removal of the suit from the Decatur county to the federal district court in Des Moines.

The plaintiff is Mrs. A. Kathleen Stoll. On two occasions when she put the telephone to her right ear, Mrs. Stoll says there "occurred a loud, harsh and untimely ringing." The first time was

Aug. 8, 1953, and the second Dec. 24, 1953, she said.

Either faulty equipment or negligence on the part of a company employe is to blame, Mrs. Stoll charges, stating that "delicate parts of the ear were damaged," and she "has a constant ringing in the head." She asks $5,000 damages on each of the two counts.

V V

New York Independent Gets Approval for Rate Increase

The New York Public Service Commission accepted a tariff amendment filed by DeKalb Telephone Co. designed to increase rates by about $1,500 annually, effective Nov. 1. The company serves about 220 stations in and near DeKalb Junction, St. Lawrence county.

In filing its new rates, the company reported a need for additional annual revenues to offset increased operating expenses.

V V

Oklahoma Commission Approves Two Sale Applications

The following Oklahoma Corporation Commission activity was reported on Nov. 15 by B. Richardson, commission telephone engineer: The Canute Telephone Co. has been sold by Ted Scott to J. W. Oaks. The company serves 250 stations.

The Union City Telephone Co., a magneto exchange of approximately 200 stations which has been owned and operated by Joe Dickerson, has been purchased by M. P. Wright.

The Southwestern Bell Telephone Co. has filed its application to buy the Mustang Telephone Co. from Otis Mayfield.

V V

New York Independent Petitions Commission

On Nov. 9, the New York Public Service Commission was scheduled to hear the petition of the Dunkirk & Fredonia Telephone Co., Fredonia, for:

(a) approval of amendment of certificate of incorporation;

(b) authority to sell $125,000 4¼ per cent first mortgage series B bonds;

(c) authority to exchange 600 outstanding shares of $100 par value common stock for 8,400 shares of new no par value common stock;

(d) authority to exchange 600 shares of 4½ per cent preferred stock for 600 shares of 5 per cent preferred stock;

(e) authority to sell 900 shares of $100 par 5 per cent preferred stock, and

(f) authority to transfer $108,000 from surplus to capital.

Minn. Company Seeking REA Loan, Granted Dial Rate Approval

Authority to increase rates at its Pequot Lakes and Pine River exchanges was granted the Arvig Telephone Co. on Nov. 15 by the Minnesota Railroad & Warehouse Commission.

The commission noted that REA loan funds—to modernize and extend service in the two exchanges—were to be released to the Arvig company only on approval of a schedule of rates calculated to support the proposed investment in complete automatic equipment.

Operating revenues were expected to rise from the present $39,117 to $69,552 under the automatic rate schedule, and net income from $4,719 to $18,327, a 3.16 per cent return on a plant original cost of $580,000.

Present rates and those approved for automatic service are as follows:

	*Present Manual**	*Approved Automatic†*
One-party business	$4.00	$7.00
Two-party business	3.75	6.00
Four-party business (Jenkins only)	4.25(a)	7.00
Four-party business (magneto—Jenkins only)	3.75	—
Rural multi-party business	3.75(a)	5.75
Rural multi-party business (magneto)	3.25	—
One-party residence	3.00	4.50
Two-party residence	—	4.00
Four-party residence (Jenkins only)	3.25(a)	4.50
Four-party residence (magneto—Jenkins only)	2.75	—
Four-party residence	2.50	3.25
Rural multi-party residence	2.75(a)	4.25
Rural multi-party residence (magneto)	2.25	—
Mileage charge for one-party service beyond the local base rate area, each ¼ mile or fraction thereof (net)	.50	—
Mileage charge for service beyond the local base rate area, each ⅛ mile or fraction thereof:		
One-party	—	.40
Two-party, each subscriber	—	.25
Four-party, each subscriber	—	.15

*Present rates to be billed monthly in advance with a discount of 25 cents to be allowed on all gross rates if paid on or before the 15th day of the month in which service is rendered.

†The approved rates are all to be billed monthly in advance at the *net* rate. Payment for service is due when bill is rendered.

(a) Rural common battery service, not to exceed 10-party, is extended only upon demand of at least eight subscribers within 8 miles from the central office and said eight subscribers are located along the same existing pole line following the same general direction.

The Arvig company serves approximately 461 local and 345 rural stations. After conversion to automatic operation, it is estimated the company will be serving 550 local and 437 rural stations.

V V

Illinois Supreme Court Affirms $16,500,000 Increase to Bell

The Illinois Supreme Court on Nov. 18 affirmed the Illinois Commerce Commission's 1953 award of a 16½-million-dollar annual rate increase to Illinois Bell Telephone Co. (TELEPHONY, Apr. 10, p. 35, Apr. 17, p. 28).

In an opinion written by Justice Joseph Daily of Peoria, the court upheld a Kane County Circuit Court decision which dismissed objections by the city of Chicago to the increase.

The case dates back to Jan. 12, 1951, when Bell petitioned the commission for a $22,800,000 annual rate increase. After lengthy hearings, the commission refused to grant the company any boost in rates.

Bell carried the case to the courts, and on Jan. 22, 1953, the supreme court ruled the commission has been "unreasonable" in denying any increase and ordered it to reopen the case.

On Apr. 15, 1953, the commission entered an order granting Illinois Bell a 16½-million-dollar annual rate boost, which is now in effect. The city of Chicago appealed.

In the meantime, Illinois Bell has petitioned the commission for another rate increase, of $24,900,000 a year. This hasn't been acted upon.

In affirming the increase, the supreme court upheld commission findings that the present fair value of company property is 586 million dollars and a "proper" rate of return on that is 5.2 per cent.

V V

Minnesota Company Gains Rate Raise; Seeks Third REA Loan

Rate increases for the Park Region Mutual Telephone Co., Underwood, were approved on Nov. 15 by the Minnesota Railroad & Warehouse Commission.

The Park Region company has received two REA loan allocations—one to convert its Dalton and Underwood exchanges to automatic operation, the other to cover increases in material costs and wages.

The company also has applied for a third REA loan to be used in converting its Maine exchange to automatic operation. This latter loan is contingent upon the approval of a schedule of rates designed to support the loan, the commission noted.

Under the increased schedule of

rates effective at the Underwood and Dalton exchanges the first billing date following Nov. 30, operating revenues are to rise from $34,010 to $38,456 and net income from $2,473 to $6,233, a return of 2.16 per cent on a plant original cost of $287,000.

Following the conversion of the Maine exchange to automatic, increased rates there would cause the company's revenues to rise to $42,238, but net income would drop to $6,191, a 1.87 per cent return on a plant original cost of $331,000.

Following are the present and approved rates at the Park Region company's three exchanges:

	*Present**	*Approved†*
One-party business	$4.75	$6.00
Two-party business	4.25	5.00
Rural multi-party business	4.00	4.25
Rural multi-party business (manual) Maine	—	3.75 (a)
One-party residence	3.50	4.25
Two-party residence	—	3.75
Four-party residence	3.00	3.25
Rural multi-party residence	3.50	3.75
Rural multi-party residence (manual) (Maine)	1.25 Net	3.25 (a)
Mileage charge for service beyond the local base rate area, each ⅛ mile or fraction thereof:		
One-party	—	.30
Two-party, each subscriber	—	.20
Four-party, each subscriber	—	.15

Present billing: Maine: Rates are billed net.

*Dalton and Underwood: All rates are billed quarterly in advance and on all gross rates a discount of 75 cents is to be allowed if paid in the first month of the quarter in which service is rendered; 50 cents if paid in the second month of the quarter in which service is rendered; and 25 cents if paid in the third month of the quarter in which service is rendered.

†*Approved billing:* All rates to be billed net monthly in advance. Payment is due on or before the 15th day of the month in which service is rendered.

(a) Fully metallic 10-party lines. To become effective on a line at a time basis as plant is rehabilitated under manual operation. Upon conversion to automatic operation the approved rates for automatic service are to become the effective rates at the Maine exchange.

The company proposes to have a pay-station available at all times for public use, and was granted a minimum charge of 10 cents for each completed local message.

The Park Region company serves approximately 321 local and 570 rural stations.

New York Independent Seeks To Sell System to Two Others

The New York Public Service Commission on Nov. 19 was to have heard the petition of the Patrons Telephone Co., Lysander, for authority to transfer its system to Cato & Meridian Telephone Co., and Oswego County Independent Telephone Co., Fulton.

On that date the Cato & Meridian company also was to have petitioned for authority to issue 275 shares of no par common stock.

V V

Illinois Company Applies For $1,061,000 Rate Raise

An application for an increase in telephone rates in 42 exchanges in Central Illinois, was filed Nov. 16 by the Illinois Telephone Co., Bloomington, with the Illinois Commerce Commission. The proposed increase sought would total $1,061,000 annually.

Increased operating costs, steadily declining earnings, and the need to attract additional capital for continued growth and improvement are the basic reasons why the company finds it necessary to ask for increased revenues at this time, according to President James F. Van de Vusse.

"We will require several million in new capital during the next two years," Mr. Van de Vusse stated. "The money for expansion and improvement does not come from customers. After all expenses are met, and after allowance is made for a return to investors, little surplus remains, and never enough for expansion needs.

"The money for improvement and growth must come from people who will invest their savings in the telephone business. Sound earnings must be maintained to meet the continuing telephone needs of the public. A prosperous telephone company can more readily give good telephone service and meet needs for expansion."

V V

Independent Files New Rate Petition in Virginia

The Virginia Corporation Commission has scheduled a public hearing for Dec. 22 on a new petition by Tidewater Telephone Co., Warsaw, for higher rates (TELEPHONY, Sept. 11, p. 44).

The company two months ago withdrew an application for increased rates, but applied again on Nov. 15 on grounds that recent hurricane damage to its telephone system makes rate relief "even more imperative."

After the company originally filed last August for a rate boost, a number of counties it serves north and east of Richmond complained about the existing service and suggested rate relief be withheld until improvements were made. In September the company withdrew its application pending an investigation of the complaints.

The company said in its new application that a program of improvements was being carried out "with a high degree of success" until the recent hurricane came along and damaged poles and lines. "Even now, several months must elapse before all effects of the storm can be removed from the system," the company said.

It seeks to increase the individual residence rate from $4.00 to $5.00, and the one-party business rate from $5.00 to $8.00 a month.

The company serves about 11,000 subscribers.

V V

Nebraska Companies Petition to Adopt Model Tariff

About 100 small company members of the Nebraska Telephone Association have filed a petition with the Nebraska Railway Commission for permission to adopt a model tariff.

The tariff is divided into four sections: (1) definitions, (2) general exchange tariff, (3) rules and regulations, (4) message toll telephone tariff. It does not contain rates and charges.

Preparation of the tariff was directed by James L. Morrison, secretary-treasurer of the Nebraska Telephone Association, with the cooperation and endorsement of the association's board of directors.

V V

North Carolina Independent Asks to Pay Stock Dividend

The North State Telephone Co., High Point, on Nov. 15 asked the North Carolina Utilities Commission for permission to use part of its surplus to pay a 10 per cent stock dividend to its stockholders.

The transaction, the company told the commission, would involve the transfer of $85,000 from its unappropriated surplus account to its common stock account. To avoid fractional shares, the company proposes to issue 100 additional common stock shares which could be used to round out full shares. The 100 shares would be priced at $115 each, or at a price to be set by the commission.

North State, which operates at High Point, Thomasville and Randleman, said it has grown from 9,000 telephones in 1944, to 24,868 as of Oct. 30, and that its rates are "probably the lowest in the state for exchanges of like size

and dial service." It said that as of Sept. 30 it had $850,000 in common stock outstanding and an unappropriated surplus of $205,710.14. Its charter authorized it to issue up to one million dollars worth of common stock.

V V

Group of N. C. Subscribers Asks To Join Independent, Not Co-op

Representatives of two dozen prospective members of the Yadkin Telephone Membership Corp. asked the North Carolina Utilities Commission Nov. 19 to help them become customers of the Central Telephone Co., Charlottesville, Va., rather than join the Yadkin Valley group.

They pointed out that they live along Swan Creek Road near Jonesville, within easy reach of Central's exchange at Elkin and within the Elkin trading area, and protested that joining the cooperative would mean that they would have to pay toll charges to talk with Elkin.

At the hearing, Central officials conceded that Swan Creek Road had been placed in the cooperative's territory as a result of an agreement made by the cooperative, the company and other parties involved, but said it would serve the Swan Creek Road section if the commission wished.

Spokesmen for the REA cooperative protested that 21 of the persons now seeking to join Central's facilities had signed as REA members and had participated in organizing the cooperative, which, they said, is dependent upon all member-customers standing by their agreements. They said that if persons who asked for cooperative lines drop out, the undertaking may be weakened seriously.

V V

Missouri Independent Asks To Issue $1,250,000 Bonds

Missouri Telephone Co., Columbia, asked commission authority on Nov. 19 to issue and sell $1,250,000 of first mortgage 3½ per cent bonds to mature in 1979.

The company told the Missouri Public Service Commission the proceeds would be used to refund $729,000 of outstanding 4½ per cent bonds and to expand and improve its facilities.

The company operates in Columbia, Centralia, Clark, Macon, Queen City and Sturgeon.

V V

Asks Sale to Southwestern Bell

The Bloomsdale Local Telephone Co. of Ste. Genevieve County applied to the Missouri Public Service Commission on Nov. 17 to sell its properties to Southwestern Bell Telephone Co., it was reported.

V V

N. C. Independent Asks to Sell 2,000 Shares Common Stock

The Norfolk & Carolina Telephone Co., Elizabeth City, on Nov. 16 asked the North Carolina Utilities Commission for authority to sell 2,000 shares of common stock at par value of $100 a share, and to use the proceeds to pay off a short-term $200,000 note held by the Seaboard Citizens Bank of Norfolk, Va.

Stating that it also is preparing to apply for a rate increase, the company said that if the new stock issue is approved, the book value of stock outstanding will become $138.30 plus. As of Sept. 30 the stock had a book value of $147.88 plus.

The company noted that it has been paying a dividend of 7 per cent on its stock and said that 90 per cent of the new issue probably would be taken by its present stockholders.

PERSONNEL MANAGEMENT

Continued from page 18

maintaining safety and health programs, and encouraging employe interest in outside cultural affairs.

The twenty items mentioned above, relating to employe education and development, are only established and maintained through leadership. Leadership must be developed. *Business can no longer wait for leaders to happen. It must make them happen.*

When we say leaders we mean the entire management team from line foreman and traffic, accounting and commercial supervisors up through the president.

Since all things are accomplished through people, the leaders must understand what makes people "tick." Therefore, the first step of leadership training should be in *human relations*, which is covered by the general field of industrial psychology. It includes the five general points of:

(1) Emotions and feelings of people, their causes and effects.
(2) The drives which motivate people.
(3) The causes of human behavior and the remedies for poor behavior.
(4) The techniques of counseling with people on their problems.
(5) The appraisal and measurement of people.

Human relations education should be given to all levels of supervision.

Education also includes the training courses which business conducts upon its own premises, either directed by its employes or by consultants brought in for that specific purpose. Both on-the-job and off-the-job training are important. We should not overlook the advantages of apprenticeship training under cooperation of the federal and state apprenticeship agencies, functioning together with representatives of management and labor. It is claimed that 65 per cent of management's time should be spent in employe education and training.

Education is a broad term. The business world has recognized the need for additional education for employes and particularly for those who must train and lead others.

Employe education and training includes the formal type of schooling such as the advanced management seminars of courses at our universities and colleges lasting from a few days up to as long as 15 months. It includes the short specialized courses, seminars or institutes, such as the human relations courses, conference-method courses, specialized accounting courses, conference leadership courses, controllership courses, etc., also conducted through our universities and colleges as well as by private management development and training consulting firms.

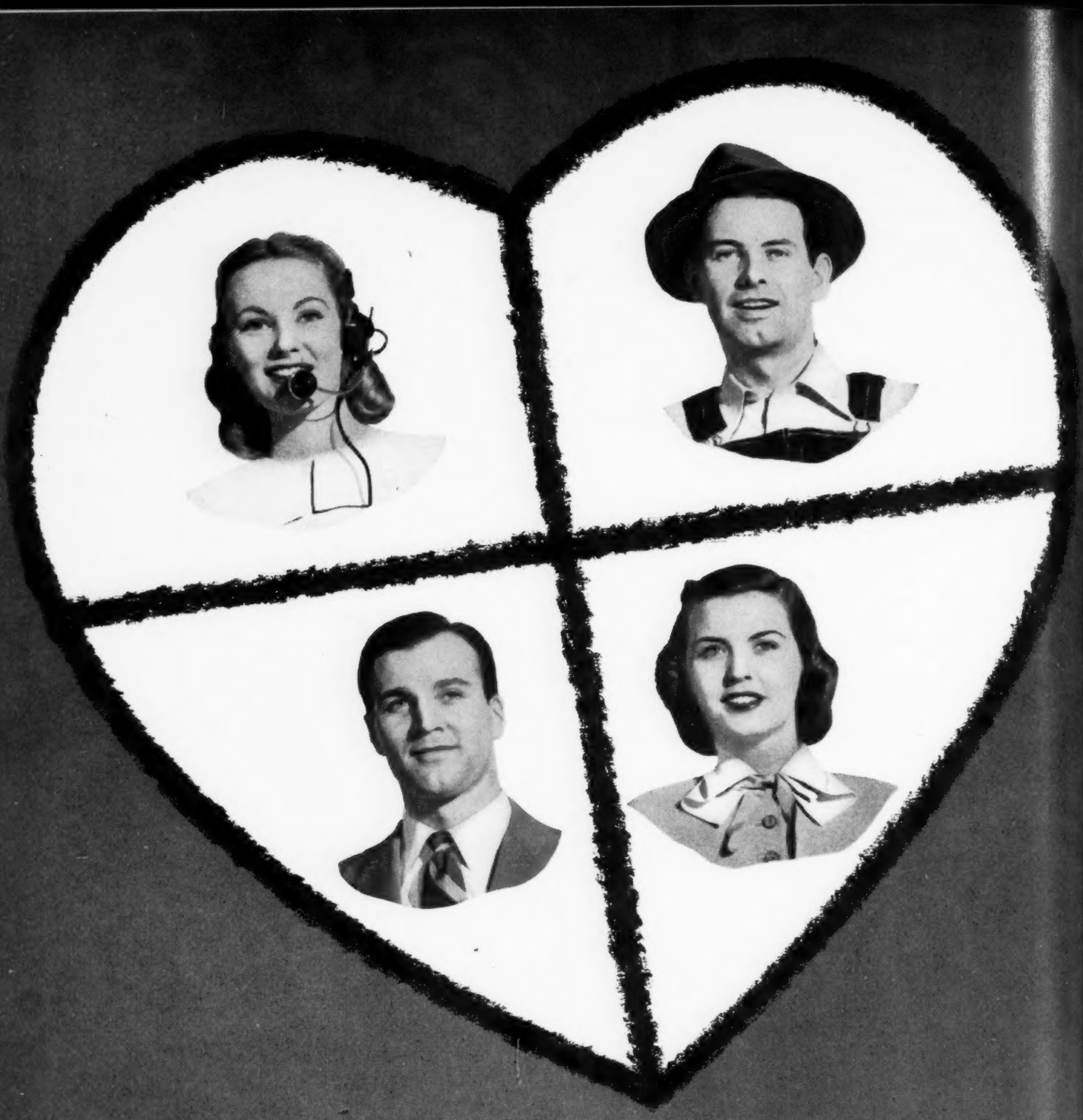
The formal type of training seminars mentioned above are vital to our existence. These business seminars for telephone people should cover a full range of applicable subjects for the upper levels of management who should be the first to get this additional education. For upper levels of supervision this should cover, at least, the six broad general fields of:

(1) Business management policy.
(2) Accounting, financing, and controllership methods.
(3) Formal communication methods.
(4) Human relations principles.
(5) Labor-management problems.
(6) Public utility and general economics.

These programs should be made available first for top levels of management. Then as the program is carried down through the levels of supervision, the courses should be limited to one or not more than two general subjects. The full range of subjects will be covered for those in the junior supervisory ranks in following sessions. Junior level meetings should not be too long, never more than two hours, and should be definitely programmed.

But *human relations* training should be carried out at all levels from the beginning of and throughout the education program. We will thereby establish "Management Reserves" or "Man-

(Please turn to page 36)



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agement in Depth" and we shall correct the management deficiencies of today and be ready for the additional management demands of tomorrow.

The efficiency of operation, the improvement of relations and understanding between employes, the improvement of customer attitudes brought about by better employe-customer relations, all show up favorably at the bottom of the income statement. Checking these credits against the cost of an adequate personnel program I am sure will show us that good personnel management practices more than pay their way.

Effective *personnel management* including a real *human relations* program, is, therefore, a must for every telephone operation!

[**EDITOR'S NOTE:** *Mr. Krieger had five appendices to his address to illustrate the various points made as follows: Appendix A—Personnel Management — Bibliography; Appendix B — Effective Personnel Management — A Must for Every Successful Business; Appendix C—The Supervisor's Role in Utility Management; Appendix D — Twenty Suggestions for the Education, Training and Development of Telephone People and Appendix E—Advanced Business Training Courses. Copies of these Appendices may be obtained by writing to Mr. Krieger.*]

V V

New Business Model Operates Without Use of Hands

A special telephone which can be operated without using the hands was installed in a Newark, N. J., clothing company for a handicapped businessman recently.

The telephone was installed by the New Jersey Bell Telephone Co.

For nine years, the clothing merchant has been suffering from a type of paralysis which prevents him from holding the receiver of a telephone for any length of time. But with his new office telephone, he simply answers a call by pressing a button, and terminates a call the same way. The receiver is not lifted.

In the base of the telephone is a small but powerful microphone which picks up conversation from 10 feet away or more. Nearby is an accompanying loudspeaker which magnifies the voice of the caller so that it can be heard many feet away from the telephone itself.

Bell people believe the new telephone will become popular among executives because with it they can do their regular work, or walk around their offices, hold or sign papers, while carrying on a telephone conversation.

IN THE NATION'S CAPITAL

Continued from page 20

short of a fair return is not to be recouped through rates higher than necessary to produce a fair return in the future.

"This commission should and will, however, endeavor to set rates which will permit the company to earn for a reasonable period in the future the rate of return which this commission finds necessary, and which at the same time will be no more than reasonable to the users of the service.

"The slippage in the company's rate of return since the present rates were placed in effect was demonstrated by Company Witness Steinhauer, and by Staff Engineer Howe of the commission. This decline in rate of return has been due to the rise in expenses and plant costs due to inflation. Testimony on the rate of attrition varied from .46 per cent a year to .33 per cent a year.

"However, in connection with the latter figure, Mr. Howe recommended that an additional allowance be made of .241 per cent to cover the attrition that has occurred between the end of the test period, Dec. 31, 1953, to shortly after the date of the hearings, or to July 31, 1954.

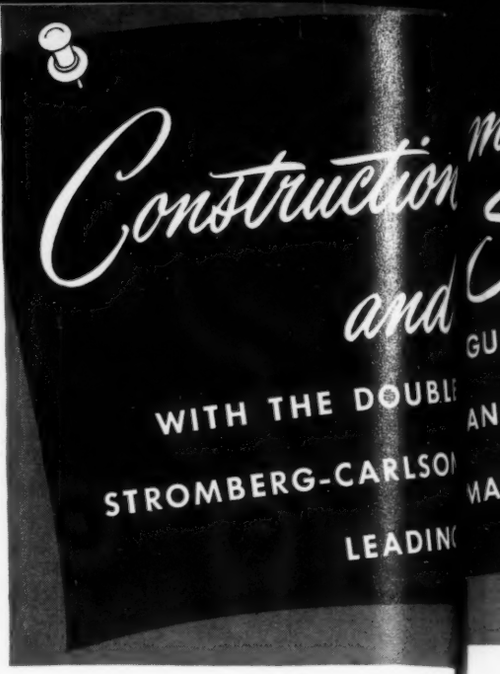
"An allowance for attrition involves a further adjustment of the level of earnings. That is to say, while the present rates would have produced a return of 4.65 per cent on the 1953 property with the depreciation expense and property taxes as they actually existed in that year, it should be recognized that the rate of return is less now and will be still less in the future, both because the depreciation and taxes per telephone will be higher and because the average property per telephone will also be higher.

"The commission finds that a reasonable allowance for attrition is one which will permit the company to realize the rate of return which the commission finds necessary over a two-year period from the time the new rates go into effect, which would cover substantially the years 1955 and 1956. The midpoint of this two-year period is Dec. 31, 1955.

"Mr. Howe, using differential calculus, developed a monthly average rate of attrition of .027125 per cent per month. The midpoint of the past period mentioned above, that is, the year 1953, is June 30, 1953. The allowance for attrition beyond that point should be for a period of 30 months, that is, to Dec. 31, 1955.

"There are several methods which could be followed in making an allowance for attrition. One possibility would be that the attrition of .027125 per month accumulates in 30 months to .81375 per cent, which figure of .81375 per cent would be in addition to the fair rate of return which the commission finds necessary for the company to actually earn.

"Another method would be to multiply the base upon which Mr. Howe computed his attrition, namely, $45,038,213, which is the average net investment for 1953, by the cumulative attrition of .81375 per cent, which gives



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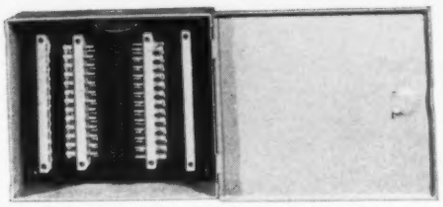

cook type "57" interior terminal box

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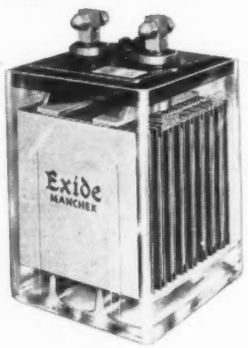

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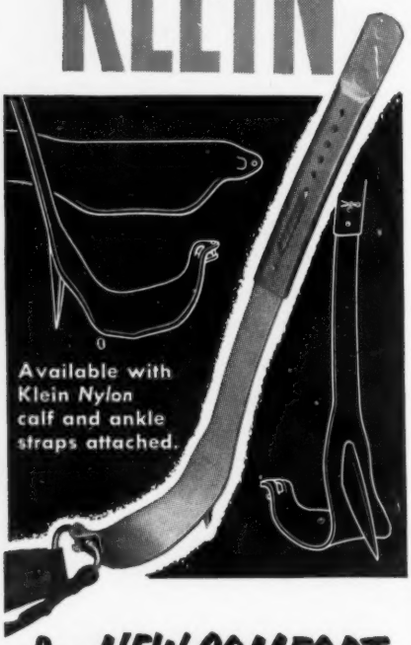

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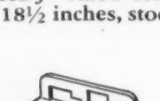

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a total attrition for 30 months of $366,498.

"A third possibility, and the one which this commission feels most nearly conforms to the nature of attrition, is to adjust the net earnings being realized under the present rates, namely, $2,368,524, for this slippage of $366,498.

"This produces a going level of earnings of $2,002,026. This $2,002,026 is the amount of average annual earnings which the company may be expected to earn upon property of the fair value of $50,995,608 during the two years after the rate adjustment is put into effect.

"The figure developed by Mr. Howe for converting a deficiency in net operating earnings to a deficiency in revenue after allowance for federal and state income taxes, gross revenue taxes, and other items was 45.81 per cent, so that after the deficiency in earnings is determined, it should be divided by this conversion factor to find the additional revenue requirements of the petitioner."

The Arizona case is not the first time that the idea of making a separate allowance, in fixing future rates, for "attrition" loss was considered. But to this writer's knowledge it is the first time the idea was actually put into effect as a separate allowance. At the recent 66th annual convention of the National Association of Railroad & Utilities Commissioners, the report of the "Committee on Progress in the Regulation of Public Utilities," headed by Chairman Benjamin F. Feinberg of the New York Public Service Commission, made some reference to this technique.

According to the Feinberg report, the suggestion was made by the Chesapeake & Potomac Telephone Co. in a case before the Virginia Corporation Commission. But a majority of the commission declined to make special allowance for attrition which was shown to have amounted—during a test period—to one-half of 1 per cent. Some commissions have tried to minimize the impact of attrition loss by using so-called "end of period" rate bases, but this does not cure or eliminate attrition loss in the future. The Washington state commission, according to the Feinberg report, found that it would be too "conjectural" to attempt to measure the future dollar effect of attrition.

REA Two Per Cent Money and Rates

Another interesting item in the Feinberg report suggests that small telephone companies, which obtain REA loans at cheap interest rates, may find themselves compelled to take a lower rate of return from their state commissions, when the time comes for fixing rates. If the state commissions should begin discounting the subnormal interest allowed on REA loans (by cutting down the rate of return in rate cases), the advantage of such loans for small telephone companies might be compromised to some extent.

According to the Feinberg report, Chairman Broyles of the Louisiana commission has commented that REA telephone loans to small companies increase problems of rate-making. Nearly all these loans and plant expansions have taken place in a period of great inflation. Most of the borrowers' plants are obsolete and must be replaced largely by high-cost construction.

Broyles noted that the larger companies have a mixture of low-cost and high-cost plant and their average cost per installed station is less than that of REA borrowers. Some of these borrowers have an interest rate of only 2 per cent for 90 per cent of their capital, which compares with an interest rate of 3.75 per cent and debt ratio of 40 to 50 per cent which the larger telephone companies have. Chairman Broyles states: "It is, therefore, obvious that the company that borrows 90 per cent of its total capital at a rate of 2 per cent can get along with a much lower rate of return than 6 per cent."

Chairman Broyles also points out another difficulty pertaining to charges for rural service by REA borrowers. This is the fact that the loan contracts contain restrictions against mileage charges or zone rates. But it is expected that changes in the REA's methods and policies may alleviate some of these problems.

V V

Pacific T&T Uses Helicopter To String Cable in California

Pacific Telephone & Telegraph Co. on Nov. 8 used a helicopter to string a new telephone cable across 2 miles of rugged mountain country back of El Toro Marine Air Base in California.

It was the first time the company had ever used aircraft to speed telephone installation.

The new cable extends from a point just south of Cooks Corners across rugged terrain to Trabuco Canyon, where some 100 residents are waiting for service.

Poles to carry the cable are already in place and the low-flying helicopter laid a manila rope on the cross arms so the new line could be pulled into position.

The customers will hear the ring of their new telephones by Dec. 15, the company said.

V V

New Independent in Virginia

The Deerfield (Va.) Telephone Co. was recently incorporated. Henry C. Jarvis, Millboro, is president. Total capitalization: $2,500.

REA ALLOCATIONS

Concluded from page 29

A total of 809 subscribers in Jefferson county will receive automatic service as a result of the three REA loans. These total $263,000. The completed system will consist of 215 miles of line, with automatic exchanges at Woodlawn and Waltonville. D. A. Stephenson is president of the Woodlawn company.

* * *

Also on Nov. 8, Santa Rosa Telephone Cooperative, Vernon, Tex., received allocation of $47,000, third loan to this borrower. The cooperative plans to use these loan funds to complete the second section of the Santa Rosa system. An additional central office will be constructed at Oklaunion, and 27 miles of line and other facilities added to serve 57 subscribers who were not included in the previous loans.

With the three REA loans, totaling $687,000, the Santa Rosa cooperative will be able to offer new and improved service to 1,087 subscribers in Clay, Foard, Hardeman, Wichita and Wilbarger counties. The Farmers Valley, South Crowell, Goodlet, Medicine Mound, Charlie, Thalia and White City central offices have been cut over and more than 400 subscribers are now receiving automatic service in the first section of the system.

The completed Santa Rosa system will consist of 642 miles of line and eight exchanges. Richard Kempf is president and Carl G. Freeling is manager of the Santa Rosa cooperative.

* * *

LaCenter (Wash.) Telephone Co. on Nov. 12 was allocated an REA loan of $119,000, second loan to this borrower. These loan funds will be used to complete the system authorized under the first loan of $140,000 approved in May, 1953.

The two REA loans will enable the LaCenter company to bring new and improved service to about 430 subscribers in Clark county. Automatic central offices for the new system will be at LaCenter, View and Amboy. Under present plans, subscribers will be able to call among all three exchange areas without toll charge. J. P. Cerveny is president of the LaCenter company.

V V

Property Burns—Line Is Busy

A general store in the village of Melrose, Ont., as well as the storekeeper's home burned on Nov. 9 while a customer tried in vain for more than 20 minutes to break into a party line chat and telephone for help.

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One of C&D's typical installations in use at the Delta Telephone and Telegraph Co., Courtland, Calif. The 24 PlastiCal (lead-calcium) cells, Type PCE-420, have a 420 A.H. capacity.

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When you order your next telephone battery, specify C&D. For with C&D, you get:

1. **One-piece, permanently-sealed plastic case. Entire unit is shock-resistant, lighter, and more compact than glass or rubber.**
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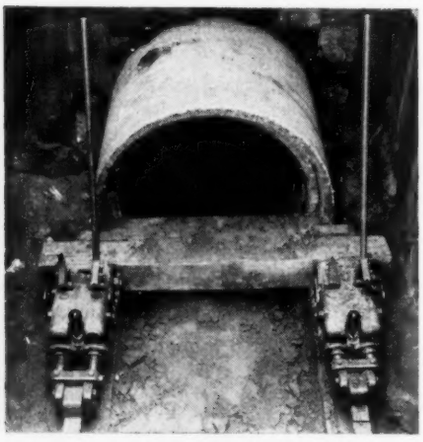

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Write today for descriptive literature. Greenlee Tool Co., 2071 Columbia Avenue, Rockford, Illinois, U.S.A.

Communications Industry Has Least Accidents, Booklet Shows

The 1954 series of "Accident Rates" booklets just published by the National Safety Council, shows the communications industry has the lowest number of injuries—in both frequency and severity—among 40 industries reporting 1953 experience.

Among the outstanding achievements in safety is that of the Southwestern Bell Telephone Co.—18,624,242 injury-free manhours, the third longest record in the world.

The pamphlets provide not only the current accident rates, but also a historical rundown of rates for some years back.

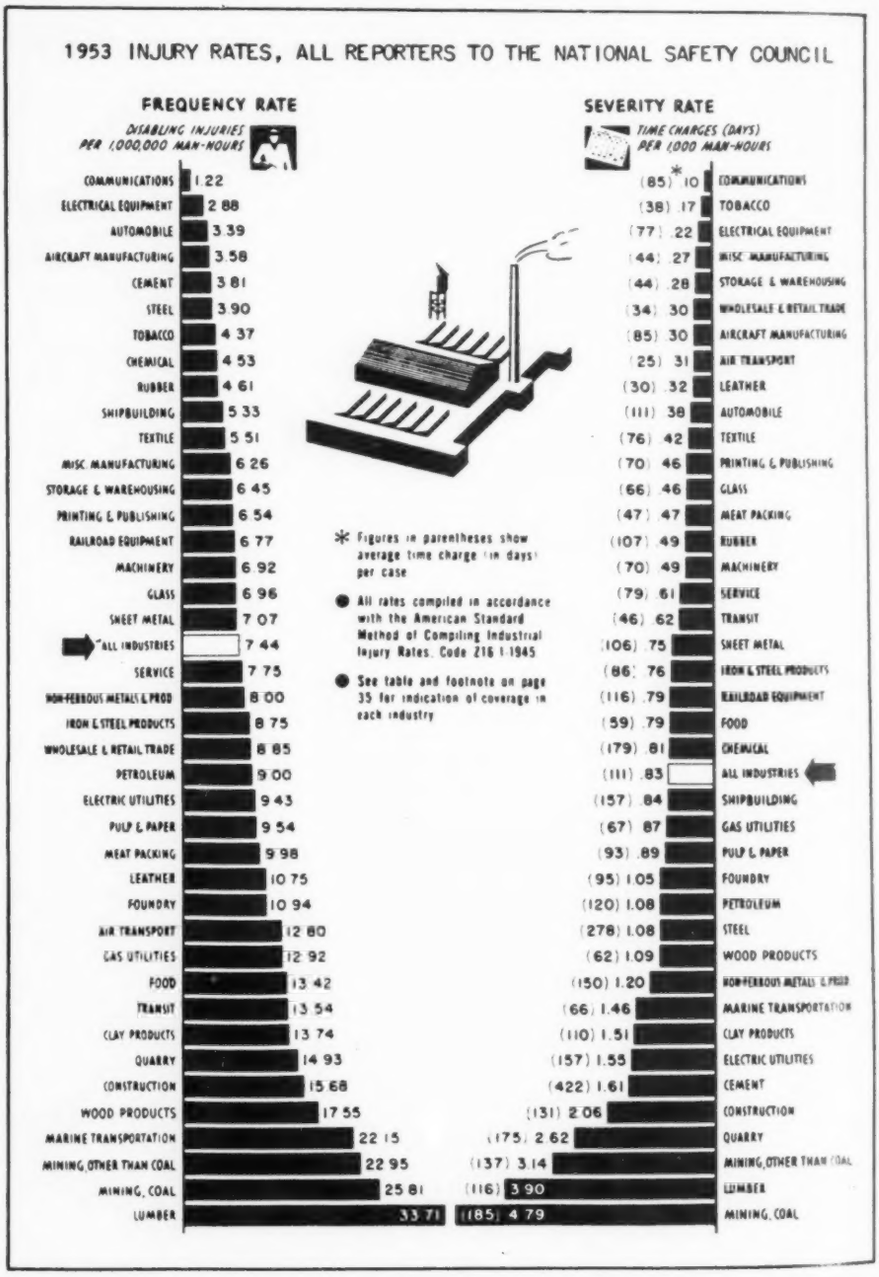
Of interest to telephone companies is the booklet subtitled "'Communications, Electric Utilities, Gas Utilities." It may be purchased from the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

V V

Col. Thames to Head Army's Signal Plans and Operations

Col. W. Mack Thames has been appointed Chief of the Signal Plans and Operations Division in the Office of the Chief Signal Officer, U. S. Army, Washington, D. C., succeeding Brig. Gen. Reginald P. Lyman, who has retired.

Colonel Thames had been serving as assistant chief of the Engineering and


1953 INJURY RATES, ALL REPORTERS TO THE NATIONAL SAFETY COUNCIL
FREQUENCY RATE
DISABLING INJURIES PER 1,000,000 MAN-HOURS
SEVERITY RATE
TIME CHARGES (DAYS) PER 1,000 MAN-HOURS
COMMUNICATIONS 1.22 (85) * 10 COMMUNICATIONS
ELECTRICAL EQUIPMENT 2.88 (38) .17 TOBACCO
AUTOMOBILE 3.39 (77) .22 ELECTRICAL EQUIPMENT
AIRCRAFT MANUFACTURING 3.58 (44) .27 MISC. MANUFACTURING
CEMENT 3.81 (44) .28 STORAGE & WAREHOUSING
STEEL 3.90 (34) .30 WHOLESALE & RETAIL TRADE
TOBACCO 4.37 (85) .30 AIRCRAFT MANUFACTURING
CHEMICAL 4.53 (25) .31 AIR TRANSPORT
RUBBER 4.61 (30) .32 LEATHER
SHIPBUILDING 5.33 (111) .38 AUTOMOBILE
TEXTILE 5.51 (76) .42 TEXTILE
MISC. MANUFACTURING 6.26 (70) .46 PRINTING & PUBLISHING
STORAGE & WAREHOUSING 6.45 (66) .46 GLASS
PRINTING & PUBLISHING 6.54 (47) .47 MEAT PACKING
RAILROAD EQUIPMENT 6.77 (107) .49 RUBBER
MACHINERY 6.92 (70) .49 MACHINERY
GLASS 6.96 (79) .61 SERVICE
SHEET METAL 7.07 (46) .62 TRANSIT
ALL INDUSTRIES 7.44 (106) .75 SHEET METAL
SERVICE 7.75 (86) .76 IRON & STEEL PRODUCTS
NON-FERROUS METALS & PROD 8.00 (116) .79 RAILROAD EQUIPMENT
IRON & STEEL PRODUCTS 8.75 (59) .79 FOOD
WHOLESALE & RETAIL TRADE 8.85 (179) .81 CHEMICAL
PETROLEUM 9.00 (111) .83 ALL INDUSTRIES
ELECTRIC UTILITIES 9.43 (157) .84 SHIPBUILDING
PULP & PAPER 9.54 (67) .87 GAS UTILITIES
MEAT PACKING 9.98 (93) .89 PULP & PAPER
LEATHER 10.75 (95) 1.05 FOUNDRY
FOUNDRY 10.94 (120) 1.08 PETROLEUM
AIR TRANSPORT 12.80 (278) 1.08 STEEL
GAS UTILITIES 12.92 (62) 1.09 WOOD PRODUCTS
FOOD 13.42 (150) 1.20 NON-FERROUS METALS & PROD
TRANSIT 13.54 (66) 1.46 MARINE TRANSPORTATION
CLAY PRODUCTS 13.74 (110) 1.51 CLAY PRODUCTS
QUARRY 14.93 (157) 1.55 ELECTRIC UTILITIES
CONSTRUCTION 15.68 (422) 1.61 CEMENT
WOOD PRODUCTS 17.55 (131) 2.06 CONSTRUCTION
MARINE TRANSPORTATION 22.15 (175) 2.62 QUARRY
MINING, OTHER THAN COAL 22.95 (137) 3.14 MINING, OTHER THAN COAL
MINING, COAL 25.81 (116) 3.90 LUMBER
LUMBER 33.71 (185) 4.79 MINING, COAL
* Figures in parentheses show average time charge (in days) per case
All rates compiled in accordance with the American Standard Method of Compiling Industrial Injury Rates. Code Z16.1-1945
See table and footnote on page 35 for indication of coverage in each industry

The above graph of 1953 injury rates by industries shows the communications industry as lowest in both frequency and severity of accidents. The information is reprinted from the National Safety Council's booklet titled "Accident Rates—1953" which is now available.

COL. W. M. THAMES

Technical Division in the Office of the Chief Signal Officer prior to his new assignment.

A veteran of both World War II and the Korean outbreak, Colonel Thames has the distinction of being the first to organize an air lift of ground troops at the beginning of Korean hostilities.

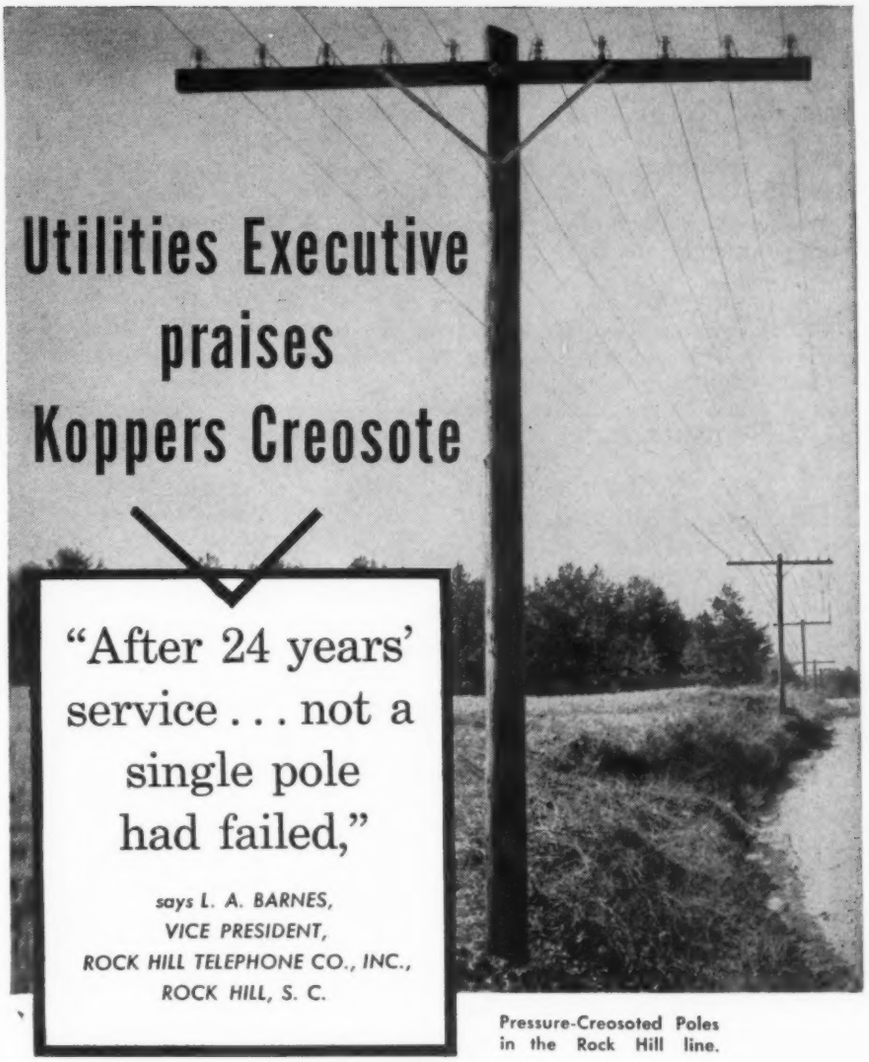
Colonel Thames entered the Army in February, 1941, as signal officer for Camp Blanding, Fla. In November, 1942, he became submarine cable engineer with the Alaska Communication System. From December, 1943, until August, 1945, he served first as assistant signal officer for the 4th, and later the 9th U. S. Armies.

In September, 1945, Colonel Thames was made assistant director of engineering at the Signal Corps Engineering Laboratory at Fort Monmouth, N. J., and served in this capacity until October, 1946, when he became Commanding Officer of the Signal Corps Plant Engineering Agency with headquarters in Washington, D. C.

In June, 1948, he became a student at the Command and General Staff College at Fort Leavenworth, Kan.

Upon completion of his studies at Fort Leavenworth, Colonel Thames was made Deputy Signal Officer, Far East Command, Tokyo. He served in this post until July, 1951, when he returned to this country to attend the Army War College, Carlisle Barracks, Pa. Completing his course of study at the Army War College in June, 1952, he was assigned assistant chief of the E&T Division, Office of the Chief Signal Officer.

During his military career, Colonel Thames has participated in combat in all theatres recognized by the Department of Defense. He has been awarded


Utilities Executive praises Koppers Creosote
"After 24 years' service . . . not a single pole had failed,"
says L. A. BARNES, VICE PRESIDENT, ROCK HILL TELEPHONE CO., INC., ROCK HILL, S. C.

Pressure-Creosoted Poles in the Rock Hill line.

• Back in 1930, the Rock Hill Telephone Company purchased and erected, in their Rock Hill-Lancaster toll line, a quantity of poles, pressure-treated with Koppers Creosote. After 24 years' service an inspection made by the telephone company revealed that not a single pole had failed due to deterioration.

This is the kind of service utility companies are getting from poles treated with Koppers Creosote. To get this kind of quality and long life for your poles always insist on clean poles, pressure-treated with creosote—the proven preservative.

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the Legion of Merit, the Bronze Star Medal and the Army Commendation Ribbon.

He attended Clemson (S. C.) Agricultural and Mechanical College, receiving a Bachelor of Science degree in Electrical Engineering in 1932.

After graduation, Colonel Thames became associated with the Southern Bell Telephone & Telegraph Co. at Gainesville, Fla. He was transferred in 1935 to New Orleans, La., as a transmission engineer and later became Louisiana division construction supervisor, a position he held until 1941 when he was called to active duty.

V V

Illinois Independent Provides Microwave for TV Station

Illinois Telephone Co. became the first Independent company in Illinois to provide microwave facilities for a television station last month when Station WBLN at Bloomington began broadcasting live network television programs of the American Broadcasting Co.

Bloomington is the 11th city in the state to have a station on the television network, and Station WBLN is the 17th station to broadcast live programs, as a result of the telephone company's venture into the television field.

James F. Van de Vusse, president of Illinois Telephone Co., explains that the company brings programs to Bloomington over a 30-mile radio relay route from Groveland, Ill. At the 193-foot tower near Groveland, they are tapped off the Chicago-St. Louis radio relay route which is jointly owned by the Long Lines Department of the American Telephone & Telegraph Co. and the Illinois Bell Telephone Co.

In order to tap this route, it was necessary for Illinois Telephone Co. to construct a microwave tower and a small equipment building on a farm near Danvers. This tower relays the television programs from the Groveland tower to receiving equipment installed by the telephone company at WBLN's station at the intersection of Routes 66 and 150, southeast of Bloomington.

By the radio relay method of transmission, super high frequencies called microwaves are sent from relay station to relay station. Like light waves they travel in a straight path, not following the curvature of the earth. Four billion microwaves pass a given point every second. In their journeys through space, they lose strength and must be amplified at relay stations such as the one at Groveland.

These relay stations are designed for unattended automatic operation. A nearby telephone central office is informed immediately, however, if trouble occurs at an unattended station. Any one of a number of trouble conditions, ranging from the opening of the door to equipment failure, will sound an alarm. By remote control, the emergency generator can be tested and other operations necessary to keep the microwave signals moving, can be performed from the telephone office.

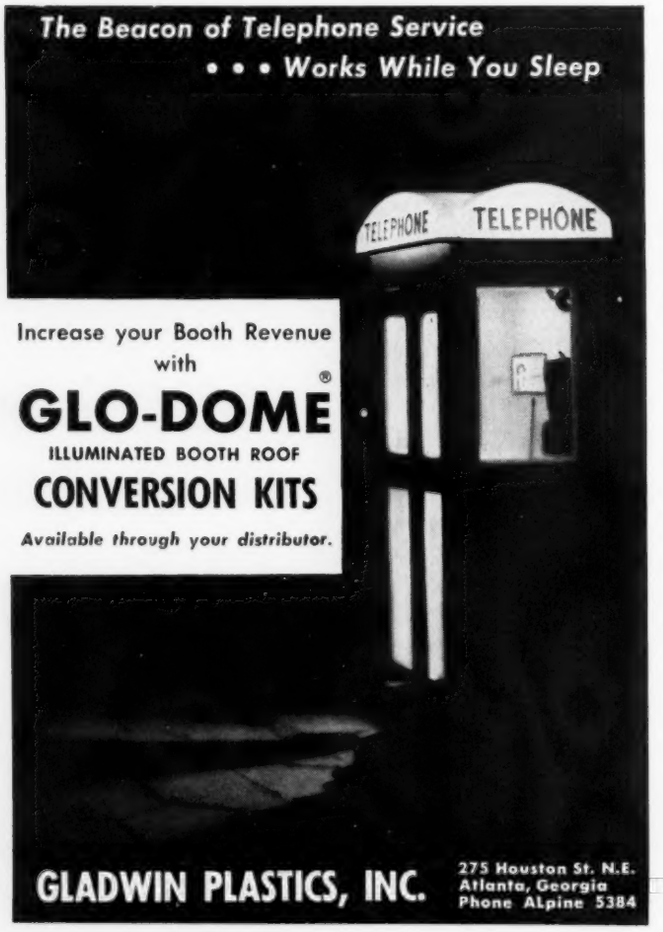
In five and a half years the Bell Telephone System's network of television facilities has grown from about 900 channel miles to the more than 61,000 it now covers. Service is provided to 347 stations in 226 cities in the United States and Canada now as compared with 12 stations located in five cities along the East Coast in 1948.

V V

Ohio Independents to Push Bill Punishing Party Line Offenders

Persons who refuse to yield party line telephones in cases of emergency will be guilty of a misdemeanor, if legislation proposed by the Ohio Independent Telephone Association passes the next Ohio Legislature.

According to Richard R. Waltz, Delta, O., president of the association, the proposed legislation will be aimed



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SWITCH-BOARD PLUGS
The plastic insulation injected between the conductors stays solid. It covers the edge of the brass shell, positively preventing cause of most shorts. Invented, and used exclusively by TELEFON FABRIK AUTOMATIC A/S since 1912.
These plugs provide unsurpassed precision in machining, solidity of construction, and high insulation safety.
Available as replacements for all popular two- and three-conductor plugs.
The most popular types are stocked by our sales distributors in U. S.
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Telephone & Supply Co.
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SUTTLE
Equipment Co.
Lawrenceville, Ill.
TELEFON FABRIK AUTOMATIC A/S
COPENHAGEN, DENMARK

at the elimination of two principal kinds of offenders. "First is the person who refuses to surrender the line when someone else needs to summon police, firemen, doctors or other emergency aid. Second is the person who fakes an emergency to obtain the line." Mr. Waltz said further, "The situation is so serious that it has drawn editorial comment in newspapers and frequent news items over the state during the last few months."

The proposed bill provides for fines of $50 to $500, and jail sentences of from 30 to 90 days. It would penalize both types of violators. All telephone companies would be required to print a warning in their directories.

"Such legislation would contribute greatly to the saving of human life and property losses," Mr. Waltz said. "A boy who drowned in a northern Ohio quarry might have been saved if help could have been summoned in time. A Licking County farmer lost his home and $400 in currency in a fire that might have been halted if the party line had been available. In March a rural home near Chillicothe was practically destroyed, resulting in the parents and five children being made homeless. An aged resident of Defiance was badly burned when fire gutted his home. The fire chief reported that a neighbor was prevented from calling the department when a party line user refused to yield the line."

In the interest of public welfare similar legislation has been enacted in other states, including Michigan, Washington, and New York.

V V

General of the Northwest Cuts Over Chewelah, Wash., Exchange

Telephones at Chewelah, Wash., will be converted to automatic operation on Dec. 8, it was announced on Nov. 10 by W. R. Jarmon, president of General Telephone Co. of the Northwest, Spokane, Wash. A new exchange building to house the automatic equipment was recently completed at a cost of $50,000.

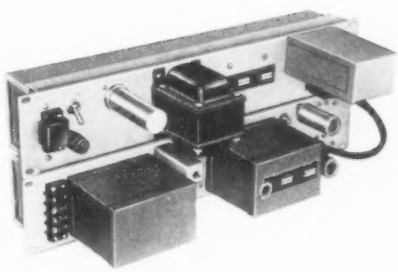
Mr. Jarmon disclosed that General of the Northwest during the last few months had spent nearly $125,000 on automatic equipment and other service improvements in Chewelah and adjacent areas. These include the construction of new trunk lines to Colville and Spokane, as well as the complete rebuilding of all rural lines served by the Chewelah exchange. All-new cable has been strung within the town itself.

Mr. Jarmon added that Chewelah will be the sixth General of the Northwest exchange to be converted to automatic operation this year.

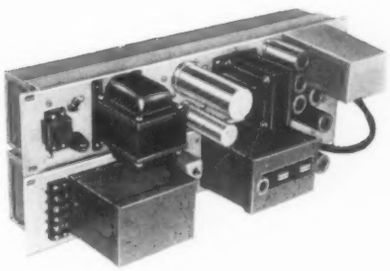
BUCKEYE CAN SHOW YOU HOW. . .

YOU CAN ADD NEW SUBSCRIBERS TO EXISTING LINES AT LOW COST

with **North's New Telephone Carrier**



Central Office Terminal



Subscriber Terminal

. . . Gives you these advantages

Provide service for waiting-list customers adjacent to lines now filled to capacity.

Reach potential customers beyond the end of present lines, without the cost of new construction to that point.

Provide private, two-party or four-party lines not now available, with resulting improvement in rate earnings.

Free physical circuits for paystations or other special revenue telephone service now blocked by lack of capacity.

Meet demands for special temporary service, such as resorts, construction camps, etc., where carrier can be moved to meet changing requirements.

Offer improved service to customers now on overcrowded lines.

Technically explained and illustrated in BULLETIN C-541

FOR FURTHER INFORMATION WRITE FOR BULLETIN C-541

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Are you one of the 4,000,000 American women who *now* know the simplest and most thorough way to examine their breasts for signs that may mean cancer —while it is in its early stage and chances of cure are the best? Our doctors assure us that BREAST SELF-EXAMINATION has already saved many a woman's life and *could* save many thousands more every year.

If you missed our film, call the American Cancer Society or write to "Cancer" in care of your local Post Office.

American Cancer Society ®

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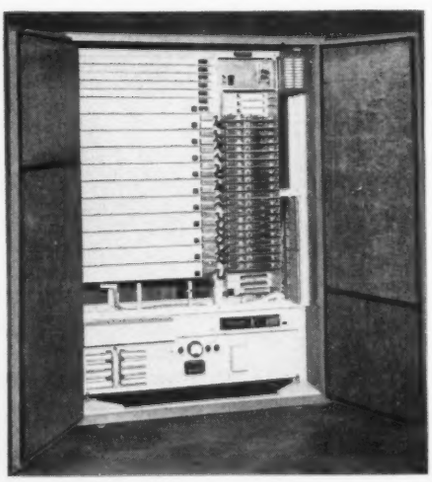
news on new PRODUCTS

FORTY-LINE DIAL PBX TELEPHONE SYSTEM—Any business subscriber needing an internal telephone system with up to 40-line capacity now can have such a dial system without worrying about providing a spare room or other concealed space for the cumbersome and sometimes unsightly switching and relay bays, power supply, batteries, and other auxiliary equipment.

This is made possible by a new type F-40 PBX system made by Stromberg-

Carlson Co. This system has a capacity of 40 local line circuits, and 10 trunk line circuits, with 12 links. The entire switching and power unit is completely housed in a compact cabinet of modern design that harmonizes with any office decor and furnishings, the company states.

The cabinet has a neutral gray finish, and is designed and attractively trimmed to look like a standard office wardrobe or stationery cabinet. It is only 6 feet



4 inches high, 4 feet 1 inch wide, and 2 feet deep, and since it occupies less than 8½ square feet, it can easily be accommodated in virtually any office.

The cabinet is mounted on full-turning casters, so it is fully mobile, and can easily be rolled through any doorway. Floor hold-downs are located inside the cabinet, to prevent unauthorized movement of the equipment.

The interior of the cabinet is acoustically treated with thick Fiberglas, to minimize normal equipment noise, and the resultant noise level is less than that of a standard typewriter, reports the company.

Full opening doors on both front and rear provide quick access to all equipment. For convenience in installing there is a removable side panel adjacent to the terminal block. The entire unit is factory wired, so that the only connections required are the house cable leads, and the 110-volt ac power lead. Power is supplied through a 6-ampere Flotrol battery eliminator.

The cordless type attendant's turret provided with the F-40 PBX system has an appearance much like an adding machine. It is approximately 6 inches high, 14½ inches wide, and 14½ inches deep, with gray crinkle finish, and attractive trim.

Type S-1-A
Frequency Modulated
Subscriber Carrier

Delivering! Yes, but awfully slow. Our own men are making each and every installation.

Results: We will have a most complete "How to Install Book" based on our own actual experience.

We earnestly solicit your continued patience. We promise you our carrier is worth waiting for.

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Name..... Title.....

Company.....

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Town and State.....

11/27/54

A handset type telephone in gray Tenite is normally furnished for the attendant's use. Provision also is made for mounting a jack, into which an operator's headset can be plugged. With such an arrangement the dial on the telephone instrument still would be used for completing calls.

The turret is arranged and equipped for eight central office trunks and two information trunks. Incoming calls are answered by the attendant and extended to the desired extension by dialing the assigned two-digit number. Night switching keys are provided for connecting five of the central office trunks to predetermined extensions when the attendant is not on duty. Audible night and fuse alarms are provided, each with a cutoff key.

In the event of ac power failure, emergency service is maintained by switching to the night trunk connections. This provides central office service on the lines normally used for night answering, with a 48-volt dry battery supplying the necessary power.

The F-40 circuits provide attendant recall service on incoming lines, monitoring service by which the attendant can monitor incoming or outgoing trunk calls without interfering with dialing or established connections, and a "splitting" feature by which the attendant can offer an incoming call to a PBX party, or can answer a recall signal, without the central office calling party hearing the conversation.

Outgoing service is provided directly from unrestricted PBX extensions, without the assistance of the attendant, by dialing a single digit.

Code call or executive-right-of-way services can be supplied if desired. Request NP 335.

• • •

HIGH SPEED SOLDERING IRON—A new soldering iron announced by Vulcan Electric Co., catalog number 450, is a model designed for use on fast production lines which require rapid soldering speeds; and it has a tip small enough for work in confined quarters.

Rated 150 watts, with 3/8-inch diameter plug-type tip, the No. 450 heats rapidly to operating temperatures, which are held during continuous production soldering.

Only 12 3/8 inches overall (including tip), the distance between hand and

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CEDAR POLES
and FIR CROSS ARMS
LOW CONDUCTIVITY AND SAFER WITH PENTACHLOROPHENOL FULL-STRENGTH TREATMENT
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LONGER LIFE
LIGHT WEIGHT
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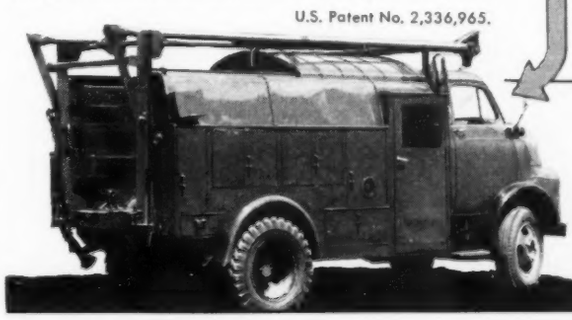
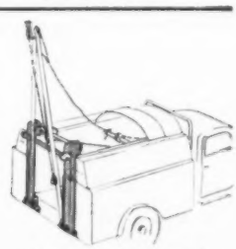
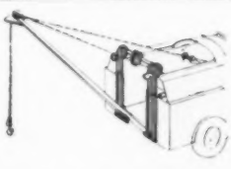
Fold up your derrick from inside the cab!
with the
TEL-E-LECT STORAGE KIT
The patented Storage Kit fits any standard utility truck body and "A" frame derrick and it can be quickly bolted on the back of your truck by your local mechanic. The derrick will go up or down in a minute or less, entirely controlled by the man in the truck cab. Working with a double drum winch, you get live boom operation—or easily adjustable derrick elevation with a single drum winch. The cost is only a fraction of other, more intricate derrick storing systems—and there's no rebuilding of your present equipment! *Write for details.*
Earth Boring Equipment for All Types of Trucks
TEL-E-LECT PRODUCTS, INC.
10,001 Minnetonka Blvd., Minneapolis 16, Minn.
U.S. Patent No. 2,336,965.


Derrick raised by simply engaging the winch.

Vertical position—winch rotation reversed.

Derrick is locked in operating position.

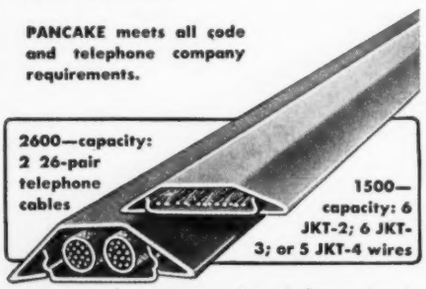
PANCAKE
The TRIP-PROOF
OVERFLOOR RACEWAY
carries
TELEPHONE WIRING
safely
over-floor!

note
extremely
LOW ramp!

You don't set up hazards when you install PANCAKE — the extra low ramp means *safety* to foot traffic . . . typewriter and adding machine stands roll over it easily, too.

PANCAKE is the safest, simplest way to get telephone outlets right to the point of use. It's easily installed without channelling into walls or floors, easy to move and extend. Two interconnecting sizes give you complete flexibility.

PANCAKE meets all code and telephone company requirements.



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Makers of
PLUGMOLD—multi-outlet systems
WIREMOLD—electrical raceways
PANCAKE—overfloor raceways

THE WIREMOLD CO.
Hartford 10, Connecticut

work is reduced and an unusual fatigue-resistant balance is provided, according to the company. A special double baffle helps maintain comfortable handle temperatures. Hardwood handles are flared for optimum grip,

while protecting the fingers from contact with hot portions of the tool. The soldering iron is available in standard voltages.

New high speed models are also available in 200-watt sizes, with either ⅜-inch or ½-inch diameter tips. Request NP 336.

• • •

NOISE-CANCELLING TELEPHONE RECEIVER ELEMENT — "Hearing is believing" sums up the case for the new "All-Clear" telephone receiver element developed by Roanwell Corp.

Identified as RA-1H, this product supplies almost four times the acoustical energy of receivers now commonly in use, and its output is about five decibels higher in the normal speech response range, according to the Roanwell company.

This performance makes the RA-1H desirable wherever telephone reception may be difficult or weak as in rural areas where long lines are common.

Industrial plants, newspaper city rooms, press rooms, and such places as are characteristically full of "sound and fury," are some of the other more likely places where the All-Clear receiver element will serve to good advantage. Its increased output is especially effective for conference calls.

The RA-1H is interchangeable with receivers in all telephones using HA-1 type elements. Request NP 337.

V V

Name Minnesota Co-op Manager

Earl H. Larson, manager of Beltrami Electric Cooperative, has been appointed acting manager of the Paul Bunyan Rural Telephone Cooperative, Bemidji, Minn., it was announced after a recent meeting of the telephone cooperative's board of directors.

V V

To Convert Ontario Company

Automatic telephone service for the Sprucedale exchange of the Muskoka & Parry Sound Telephone Co., Ltd., Emsdale, Ontario, Canada, is planned for completion in April, 1955, according to W. E. Campsall, president of the company. He reports the new system will replace one installed by him over 30 years ago.

G. A. Viane Named to Represent Cook Electric in Detroit

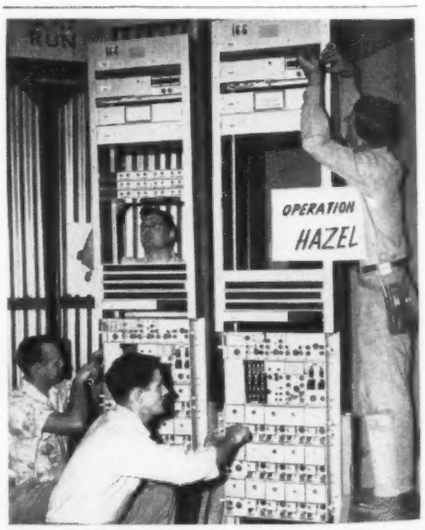
Charles H. Brunell, sales manager vice president of Cook Electric Co., has announced the appointment of George A. Viane as Detroit district representative with offices at 3049 E. Grand Blvd., Detroit 3, Mich.

Mr. Viane formerly was sales manager of one of the oldest Detroit jobbers of automotive replacement parts

G. A. VIANE

and equipment. Previously he was service engineer for the engineering division of Ford Motor Co. and for the Ternstedt instrument division of General Motors.

During the war Mr. Viane was production engineer with the Navy Bureau of Ships.



Tidewater Telephone Co. toll circuits between Richmond and Warsaw, Va., were laid waste recently by Hurricane Hazel. The above 12-channel high frequency carrier system, needed to help restore Tidewater company toll service, was assembled and tested in 16 hours without letup—one-fourth the time normally required—by a group of Lenkurt Electric Co. engineers and technicians in San Carlos, Cal. The Lenkurt men shown above are making final adjustments on the two carrier terminals before packing and shipment by air.

RT UNITS FOR RINGING AND TALKING
7 models

T UNITS FOR TALKING
9 models

BC UNITS FOR RINGING
2 models

Sub-cycle

RINGING
TALKING

RT UNITS

ECONOMICAL
COMPACT
EFFICIENT
CONVENIENT

POWER

For PBX and Small Switchboards

An "RT" Unit combines in one compact cabinet both ringing and talking power supply. ("R" stands for ringing, "T" for talking.) This combination current source eliminates the necessity for multiple or complicated installations.

All Lorain "RT" and "T" Units are housed in attractive wall-mounted cabinets. All models operate from 111, 117, or 123 volts, 60 cycle supply, and tolerate voltage fluctuations of ± 5%. They operate steadily and quietly on remarkably little power, and furnish ringing and talking current year after year without attention.

Whether your particular setup requires a power supply for ringing and talking, talking only, or ringing only, there is a Lorain Power Unit that will fulfill your requirements to your utmost satisfaction.

Write for Bulletin 159A.

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